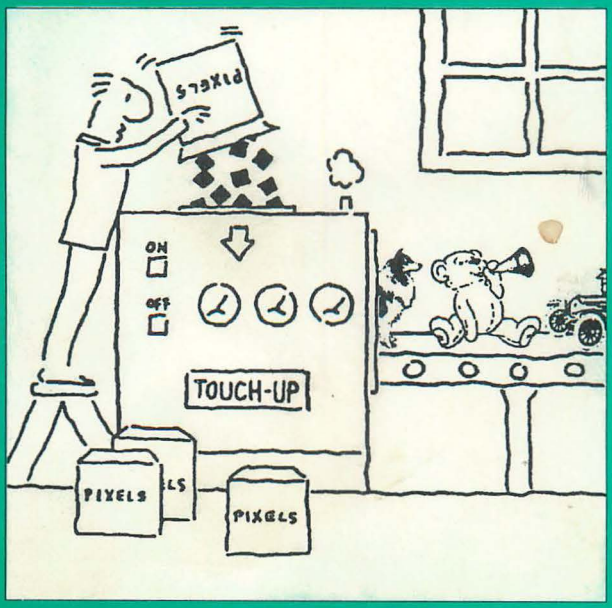
MIGRAPH

Touch-Up



Amiga Version

Special thanks to all the people who contributed their talents and worked long and unusual hours to make this product a reality. We couldn't have done it without you.

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1. Welcome

Migraph, Inc. is pleased to present you with Touch-Up, a virtual-page image creation and editing program. Now you can scan, create, and edit bit-mapped images that are larger than a single window, custom tailoring the page size and resolution to that of your output device. You can also convert scanned images to greyscale for use in video applications.

Touch-Up gives you a tool for editing images in a wide variety of formats, including IFF-ILBM, IMG, and TIFF. After saving images in the format you desire, you may import them into other programs for use in video or desktop publishing applications.

Thank you for purchasing Migraph Touch-Up. Before installing this program, please take the time to fill out the registration card and mail it in. When you register your product, you'll receive the Migraph newsletter "Headlines" which provides news on updates, upgrades, new products, etc.

System Requirements

In order to use Touch-Up you will need the following:

* An Amiga computer with a minimum of 1MB memory.

* A monitor (Touch-Up also works with the Moniterm Viking monitor)

* Kickstart 1.2 or higher.

* Workbench 1.2 or higher.

While a hard disk is not required, it is strongly recommended. The optimum system is one with at least 2MB of RAM and a hard drive.

Speed: Patience Pays Off

The ability to handle very large images comes from Touch-Up's use of buffers to store parts of the image. Touch-Up uses many buffers and needs to work with all of them as you work. These processes take time. In its normal modes of operation, Touch-Up will be slower than most paint programs you've used. It does contain a Paint mode however, in which it acts exactly like a paint program and is just as fast.

Any Color As Long As It's Black and White

Touch-Up edits monochrome images; no gray shades and no colors. Touch-Up will load color images, but in the loading process you must choose a method of converting the colors to black and white. This conversion, or mapping as it is known, is discussed in detail in a later chapter. Touch-Up does allow you to save out greyscale images in different formats. However, once an image has been converted to greyscale, it cannot be reloaded into Touch-Up for editing. You must edit the original monochome image and then convert it back to greyscale.

How to Use This Manual

Most people can't wait to start using Touch-Up to see what it can do. After reading this chapter and installing Touch-Up, there is a quick start tutorial which provides a good introduction to Touch-Up and how it works. Once you've mastered the basic techniques, the rest of the manual provides detailed information on all the modes and tools that help you get the best results from Touch-Up.

2. Installing Touch-Up

This chapter deals with installing and running Touch-Up on floppy and hard disk based systems.

Make One Working Copy

Before installing Touch-Up we recommend that you make a working copy of the original program disk. See your Amiga manual for instructions on making copies. You may make one copy of Touch-Up as stated in the license agreement. After making a working copy, please put the original in a safe place. "MASTER DISK" refers to the working copy.

Note: There may be a file named READ_ME.TXT on the Touch-Up Master Disk. If there is, please read it at this time. This file contains any last minute information about Touch-Up that was not available at the time this manual was printed.

Note: When running Touch-Up with 2.x of the Workbench, Touch-Up automatically uses the 2.x File Selector.

Installing Touch-Up Fonts

Touch-Up utilizes some fonts which are smaller than the system fonts provided with the machine. These need to be installed prior to running Touch-Up. If you are using Workbench 1.3 or higher, in order to install the fonts you must have 'FixFonts' in your 'SYS:System directory' and follow the instructions for your system.

Hard Disk System

[1] Boot your Amiga as you normally would.

[2] Place the Touch-Up disk in a floppy drive.

[3] Double-click on the Touch-Up disk icon.

[4] Double-click on the Install_Fonts icon.

Unless you are notified of an error, your fonts should now be installed.

Floppy System with Two or More Drives

[1] Boot your Amiga as you normally would.

[2] Place the Boot disk in one floppy drive and the Touch-Up disk in another floppy drive.

[3] Double-click on the Touch-Up disk icon.

[4] Double-click on the Install_Fonts icon.

Unless you are notified of an error, your fonts should now be installed.

Floppy System with 1 Floppy Drive

[1] Boot your Amiga as you normally would.

[2] Remove the Boot disk and insert the Touch-Up disk into the floppy drive.

[3] Double-click on the Touch-Up disk icon.

[4] Double-click on the Install_Fonts icon.

[5] When prompted for the Boot disk, remove the Touch-Up disk from the floppy drive and insert the Boot disk.

Unless you are notified of an error, your fonts should now be installed.

Running Touch-Up from a Floppy Disk

Running Touch-Up from a floppy disk is very easy. Since Touch-Up is a Workbench application, the Workbench must be loaded before you run Touch-Up. While you can run Touch-Up on a floppy based system, we strongly recommend you use a hard drive. Scanned images, especially those scanned at higher resolutions, take up a lot of disk space. Loading and saving these large files to floppy disks is a time consuming chore and can become quite a task.

To run Touch-Up from a floppy disk, follow these directions:

[1] Boot-up your computer if you have not already done so.

[2] Load the Workbench.

[3] Insert your backup copy of Touch-Up into the floppy drive.

[4] Double-click on the TouchUp disk icon.

[5] Double-click on the TouchUp drawer.

[6] Double-click on the TouchUp icon.

Touch-Up will load and its window will appear on your screen.

Note: If there is not enough available memory for Touch-Up to load, a message will appear stating this. To free up more memory, you will have to either shut off other applications that are currently running or empty out your RAM disk if it is full.

Note: On low memory systems, once Touch-Up is running, move its window to the back and close all other windows and applications.

Installing Touch-Up on a Hard Disk

You can install Touch-Up on a hard disk in a short period of time. Since Touch-Up is a Workbench application, you must load the Workbench before you run Touch-Up.

To install Touch-Up on a hard disk, follow these directions:

[1] Boot-up your computer if you have not already done so.

[2] Load the Workbench.

[3] Insert your backup copy of Touch-Up into the floppy drive.

[4] Double-click on the TouchUp disk icon.

[5] Drag the TouchUp drawer icon to the Hard Drive icon where you want to install Touch-Up.

[6] Double-click on the Hard Drive icon to which you just dragged the drawer.

[7] Double-click on the TouchUp drawer icon that is now on the Hard Drive.

Touch-Up is now installed on your hard drive.

[8] Double-click on the TouchUp icon within the TouchUp drawer.

Touch-Up will load and its window will appear on your screen.

On low memory systems, once Touch-Up is running, move its window to the back and close all other windows and applications.

Running Touch-Up from the CLI

Touch-Up can be run from the CLI. Below is a basic command which describes all the options. If you wish to use the current default for any setting, planes for example, simply omit reference to that setting in the command.

To run the program *without options*, type: run touchup

To run the program *with options*, type:

run touchup c2oh400w700p

c2 - uses the Touch-Up custom screen with two planes.

o - specifies overscan (2.x feature).

h400 - specifies a screen height of 400.

w700 - specifies a screen width of 700.

p - specifies a PAL screen (2.x feature).

Any of these settings can be saved as the default. When you wish to use a setting that is not the default, you can either change the default setting, or use a different entry in the command line. To specify **not** to use either a custom screen, overscan, or PAL screen, type a 0 (zero) after its entry. For instance o0 would specify no overscan. (c0 = no custom screen; p0 = no PAL screen)

Note: If you specify a screen width wider than 640 under Workbench 1.2 or 1.3, then you will need to be on a Moniterm monitor, otherwise you won't be able to access the entire image.

Note for Overseas Customers: If you are running on a PAL system and are using 1.3 of the Workbench, Touch-Up will always run in PAL.

Setting the Program Stack Size

Currently Touch-Up needs a work area on your Amiga (called the 'Stack') to be set to a value of at least 20000. Touch-Up automatically sets the stack size when you run Touch-Up from the icon provided.

If you run Touch-Up from the CLI however, you will need to set the system stack size first:

[1] To see your current value, type 'STACK'

[2] To set the stack size, type in the command 'STACK 20000'.

Running Touch-Up on a Custom Screen

Touch-Up can use a custom screen if you desire. This means that if you use a custom screen you can set the resolution and colors for the Touch-Up screen, independent of the resolution/colors of the Workbench screen.

To set the default for the custom screen, follow these directions:

[1] Select the Touch-Up icon by clicking on it once.

[2] Select "Information" from the Icon dropdown for 2.x or "Info" from the Workbench dropdown for 1.x. A dialog box will appear.

[3] Select the line "CUSTOM=N", and change the "N" to "Y" for yes.

[4] Click Save.

Touch-Up will now use the custom screen as its default setting.

Note: After initializing Touch-Up on a custom screen from the CLI, you may quit the Workbench. This frees up more memory when you are running low, or when you need additional memory for scanning.

Altering Settings for the Custom Screen

Other default settings may be altered through the same dialog box as above. Make the changes you desire, then click on Save when done.

Resolution - To alter the resolution of the custom screen, select the line "HEIGHT=" and enter the value for the resolution you desire. The default resolution width is 640.

Overscan (2.x) - Overscan is the enlargement of the display area on the monitor. It is useful when you wish to view more of the image. Overscan is either on or off. To choose overscan, select the overscan setting and set the value to "Y" for yes. Change it to "N" for no when you do not wish to use overscan.

Note: Once overscan is selected and you run Touch-Up, it may be necessary to adjust the monitor. Also, some people may not be able to use overscan because their monitor cannot be adjusted, and they will not be able to access all parts of the image.

Planes - The default number of planes is 2, which provides four colors for the screen. To alter the number of planes, select Planes and change the value. Planes=1 (two colors); Planes=2 (four colors).

Note: The RGB values of the colors may be altered by using the Palette dialog box within Touch-Up.

Note: 1 plane is recommended for those times when you are running many programs and/or may be low on chip RAM.

PAL (2.x) - When using Touch-Up V2.5 or higher, you may elect to use a PAL screen. To do this, change the PAl=N to PAL=Y.

Using a Custom Screen with 2.x

Version 2.x of the Workbench offers two advantanges over previous versions. First, you may set the size of the custom screen larger than the size of the monitor screen. This allows you to have the whole image displayed within the Touch-Up screen, rather than just part of it. Second, 2.x allows automatic scrolling. This allows you to scroll the image using the mouse rather than using the slider bars.

Taking advantage of both these features provides more freedom and flexibility when using Touch-Up. Here is a practice exercise that will enable you to see the benefits of using these features.

[1] Before running Touch-Up, set the size of the custom screen as large as you can.

The size you can set will depend on the amount of memory you have available. On a 5mb system, for instance, you should be able to set the screen size at 1500 x 1000 or larger. Experimentation is the only way to find out the limits for your particular system.

[2] Run Touch-Up and load the file HAUNTED.IFF. (located on the Touch-Up disk)

[3] Enter Paint mode. The eraser will already be selected since it is the default tool. Move the eraser to the right. Notice that the screen will scroll until the eraser hits the right edge of the custom screen. Now go the bottom edge, and then to the left edge.

As you can see, scrolling is quicker and easier than using the slider bars. More important is the fact that any work you do can be undone because the work is not "fixed" onto the screen like when you use the slider bars. This enables you to make changes across the whole image and still have access to the Undo command.

Scrolling works just as well in Clip Mode. Now you can easily create a clip box that is larger than the screen size by simply scrolling the image.

The Palette

Touch-Up has a palette tool which allows you to modify Touch-Up's colors by altering their RGB values. This is useful for reducing screen flicker when you want to run in Interlace mode. When running Touch-Up on a custom screen, the palette alters only Touch-Up's colors. However, when you run Touch-Up as a Workbench application, the palette affects the colors of the whole Workbench while Touch-Up is the "active" window. This is important to remember, especially if should you decide to save the colors as the default.

To use the palette tool, follow these directions:

[1] Select Palette from the Touch-Up dropdown menu. A dialog box will appear.

If the value for planes is set at two, four colors appear; if the planes value is set at one, two colors appear. The palette will display whatever colors you have saved as the default. However, the very first time you use the palette, it will display the default colors for 2.x: black, white, blue, and grey. These colors enable Workbench 1.4 owners to also have the 2.x 3D look while running Touch-Up.

[2] Select the color whose RGB values you wish to alter by clicking on it. To alter the RGB values move the slider for each value. As you move the slider, the screen and window colors will change.

To reduce screen flicker in Interlace mode, choose colors with little contrast between them. For instance, instead of black and white, you might choose grey and black, or red and black. It will be immediately apparent when altering the colors, whether the flicker is getting better or worse. You may need to change the RGB value of each plane color to get maximum results.

If, after changing the RGB values, you decide you would prefer the original plane values, click on **Default**. The palette will then display the original

workbench colors. To reset the values back to the previously selected palette, click on **Reset.**

[3] After the values have been changed, you may click OK to save the values for the current session, or click Cancel to quit the palette and reset the values as they originally were before you entered the palette dialog box.

[4] If you have selected a new set of values that you would like to keep as the default for the Touch-Up custom screen, select Defaults from the File menu. The Defaults dialog box will appear. Click on Save. Thereafter, these colors will be used every time you run Touch-Up.

Instructions for 1MB and 2MB Owners

If you have an Amiga with 1 or 2MB of RAM, you need to be aware of recommendations and software settings which will affect Touch-Up's scanning length, as its ability to load large images.

We strongly recommend when you use Touch-Up, that it be the only application you have running.

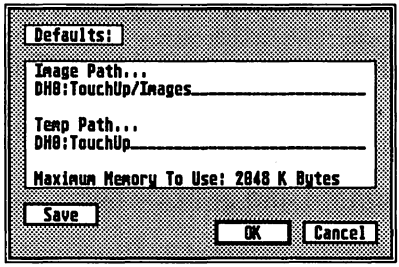
Any other applications or windows should be shut down or closed so Touch-Up has access to the maximum amount of memory. With more memory you'll get longer scan length and be able to load larger images. Correspondingly, with a smaller the amount of memory available, the scan length and the image size will be limited.

When Touch-Up initializes, it allocates the available memory in your computer to store image information. The value it uses is called Maximum Memory and it is set in the Defaults dialog box under Miscellaneous Tools. Touch-Up's default for allocating memory when it runs is 500K. Depending on your requirements, you may or may not need to alter this value. If you will not be scanning high resolution or large images and want memory

to run other programs while running Touch-Up, you can set the value lower. If you purchase additional memory and want Touch-Up to have access to more, then you can increase the value.

To alter the Maximum Memory value, follow these directions:

[1] Select Defaults from the Miscellaneous Tools icon in Clip Mode. A dialog box appears that looks like this:



[2] Click on the number shown for Maximum Memory. Use the backspace key to delete the current value, then enter the value for the memory you want Touch-Up to use.

[3] Click on Save.

[4] Click on OK. Exit Touch-Up and rerun it.

You must exit and rerun Touch-Up for the new value to be used.

Note: Because the available memory in each person's system is different, selecting a value for the Maximum Memory setting will be a trial and error process.

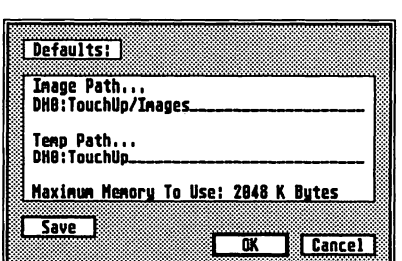
Instructions for Owners with 3MB+

Generally, if you have 3MB or more of RAM, you will not have to worry about encountering any limitations or restrictions within Touch-Up. However, if you intend on running other applications along with Touch-Up that require alot of memory, you may find that the image size you can work with may be limited.

To achieve the optimum image size when using Touch-Up, we strongly recommend that you run Touch-Up by itself so it has access to the maximum amount of memory in your system.

When Touch-Up initializes it allocates the available memory in your computer to store image information. The value it uses is called Maximum Memory and it is set in the Defaults dialog box under Miscellaneous Tools. The default for the image size buffer is 500K. If you have a lot of memory, you may change this value to a higher number. (A value of 1280 would enable a work area approximately the size of a full page 300dpi image.) When you wish to adjust this value, either to increase or limit the amount of memory that Touch-Up grabs, follow these directions:

[1] Select Defaults from the Miscellaneous Tools icon in Clip Mode. A dialog box appears that looks like this:



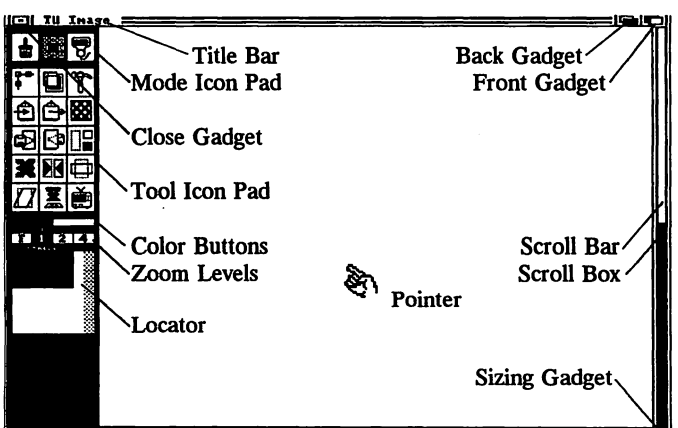
[2] Click on the number shown for Maximum Memory. Use the back-space key to delete the current value, then enter the value for the memory you want Touch-Up to use. Then click on Save.

[3] Click on OK. Exit Touch-Up and rerun it.

3. A Look Around the Screen

Before using Touch-Up, you may want to familiarize yourself with the elements of the Touch-Up screen. This section provides a brief description of each element found on the screen.

Boot-up your computer (if you have not already done so), then start Touch-Up by double clicking on Touch-Up's icon. You will initially see a dialog box with the copyright information, and then the program screen which looks like this:



Touch-Up uses a modified version of the Intuition interface. This interface contains icons and menus which make it easy to learn and use Touch-Up. If you have not used a program with the Intuition interface before, we recommend that you read your Amiga manual in addition to this chapter.

Here is a brief description of the screen elements:

Close Gadget - Use the close box to quit Touch-Up.

Title Bar - Displays the name of your current image.

Menu Bar - Touch-Up's menu bar contains all the commands. To display the menu bar, press and hold the right mouse button down. While keeping it depressed, move the pointer over the menu titles. Each menu automatically appears as the pointer passes over it. To select a menu choice, move the pointer over your choice to highlight it, then release the right mouse button. If you do not wish to make a choice, release the right mouse button somewhere outside the menu. There are also keyboard shortcuts that make Touch-Up even easier to use. The Reference chapter contains a complete list of keyboard shortcuts.

Note: Touch-Up must be the active window when you want to display its menu bar. If it is not, click anywhere inside the Touch-Up window to make it the active window.

Image Area - The image area is the large blank area where images are displayed. It is only one layer deep, just like a piece of paper. Any editing that is done will replace whatever was beneath it unless an option like Transparent is used. Unlike traditional paint programs, the image is not limited to the area of your monitor screen. This enables you to work on images much larger than your screen size.

Mode Icon Pad - This pad contains the three mode icons which represent the modes you may work in: Paint mode, Clip mode, and Scan mode. The selected icon is inverted. To change modes, simply click on a different icon.

Tool Icon Pad - This pad reflects the tools you may use in the selected mode and will change every time you select a new mode. Some of the same tools are common to more than one mode (such as Patterns) and whatever choices you may have made in one mode will still be in effect when you change modes. Clicking on some of the icons will bring up an additional pop-up menu which offers other choices. Click on your choice, or if you do not wish to change the current setting, click somewhere outside the menu. The selected icon is inverted.

Color Buttons - This icon selects the current line and pattern color, either black or white. Click on the color to select it.

Zoom Levels - Touch-Up provides four zoom levels: Full, Normal, 2x, and 4x. You may work in each mode at any of the four zoom levels with two exceptions: the Pen drawing tool does not work at Zoom Full, and Paint mode can only be used at Zoom Normal.

Locator - The bottom icon is the locator. The locator is an on-screen display with which you can see what percentage of the full page you are working on, and where you're working on the page. The primary purpose of the locator is to allow you to quickly and easily view other parts of the image.

Scroll Boxes - The boxes to the right and bottom of the window which contain scroll bars.

Sizing Gadget - A gadget located in the bottom right portion of the window. You may use the mouse to drag this box and change the shape and size of the window.

The Mouse Pointer

The small black arrow on the screen is the mouse pointer and moves around the screen as you move the mouse around your table top. Many commands can be given to your computer by performing different actions with the mouse.

Clicking means pressing the left mouse button once and immediately releasing it.

Double-clicking means clicking the mouse button twice in rapid succession.

Dragging means positioning the mouse pointer, pressing and holding down the left mouse button, then moving the mouse to a new position before releasing the button.

Press - Hold the mouse button longer than a click, then release it.

Select - There are several ways to select choices within Touch-Up, depending on where you are making the choice.

A) To make a selection from the menu bar, press and hold the right mouse button. While keeping it depressed, move the pointer over the menu choice to highlight it, then release the right mouse button. Items from submenus are selected in the same manner. If you do not wish to make a choice, move the pointer somewhere outside of the menu and release the right mouse button.

B) To select a tool in the icon pad or a button in a dialog box, position the mouse pointer over your choice, then click the left mouse button. If you do not wish to make a choice from a menu, click the left mouse button somewhere outside of the menu.

Pointer Shapes

Touch-Up has the following pointer shapes:

Cross hair (creation) pointer
The hot spot is the center of the cross hair.

Pencil (dot) pointer
The hot spot is the tip of the pencil.

Finger (selection) pointer
The hot spot is the tip if the finger.

Hand Scanner pointer
The hot spot is the upper left corner of the scanner.

Open Hand (move) pointer
This pointer appears when moving the clip box or clip area.

Arrow (choice) pointer.
This pointer is for menus, commands and dialog boxes

Paint Can (fill) pointer.
The hot spot is the tip of the paint coming out of the can.

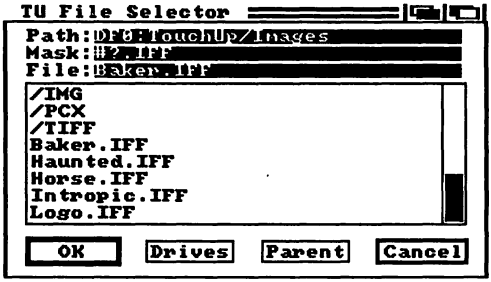
Spray Can (spray) pointer
The hot spot is the middle of the spray.

File Selector

Touch-Up uses a dialog box called the File Selector to load and save files.

Note: When running Touch-Up with 2.x of the Workbench, Touch-Up automatically uses the 2.x File Selector.

The File Selector looks like this:



While the File Selector does contain front and back gadgets, it is normally expected that you would not use them during the course of a Touch-Up session. However, should you opt to interrupt your session while the File Selector is present, you must remember the following: before you can continue to use Touch-Up, you must make the File Selector the active window and either select or save a file or select Cancel to remove the box. Otherwise, Touch-Up will still be waiting for you to take some action with the File Selector and will not let you access other parts of the program.

Note: If you get a 'Truncated Directory' alert while using the File Selector, don't worry. Nothing has been done to your drive or files. The File Selector will only handle about 150 entries in a drawer and you are being notified that this selector limit has been reached. The best way to avoid this happening is to separate your files into two or more drawers.

Path Statement:

The *Path statement* displays the location of the files listed in the directory window. The following example shows how to read a path statement. DH0:IMAGES/ means a drawer called IMAGES located on hard drive 0.

By changing the path statement, you can specify a different drawer in which to store an image, or from which to open a file.

To change the information on the path statement, follow these directions:

[1] Place the pointer anywhere on the path statement line and click the left mouse button. The position with the cursor will invert.

[2] To clear the line, press right-Amiga X. To remove individual characters, use the backspace or Delete key. When editing you may also use the left and right arrows to move the cursor within the line. The line displays 28 characters but may contain up to 120 characters. To view the remainder of the line, use the arrow keys.

[3] Type the name of the disk and drawer or drawers you want to access. Then hit Return.

The drawer's contents will be displayed in the directory window. This process is known as moving *down* the path.

You may move *up* the path (back to the root level) using one of two methods. Clicking on the Drives button brings you all the way back to the root level. Clicking once on the Parent button closes the current drawer. Continue clicking on the Parent button to go back to the root level.

Mask Statement

The *Mask statement* is used to search for a file that contains a specific character or string of characters. This can be very helpful when you are looking for a particular file type such as IFF. You may use the pound sign (#) and

question mark (?) in the mask statement as "wildcard" characters. The question mark means substitute any valid character, whereas the pound sign and question mark together signify any string of characters.

For example,

Path:DH0:TouchUp/IMAGES
Mask:#?IFF

means to find all the files with the last three letters IFF in the Images drawer in the TouchUp drawer. All files meeting these requirements will then be listed in the directory window.

Here are some other mask examples:

Mask:B#?

means to find all files that start with the letter B, such as Baker.IFF.

Mask:#?IFF#?

means to find any file that contains the letters IFF anywhere in the file name.

Enter information on this line in the same way information is entered in the Path or File statement.

File Statement

The *File Statement* is where you type the name of the file you are storing on disk or recalling from disk. Generally you will only type the name of the file the first time you use it; thereafter you may select the name from the Directory Window by clicking on it. Once you have made your selection, click OK or use the Return key.

To enter a file name, move the pointer to the File Statement line and click the left mouse button. Once the cursor appears, enter the file name.

To cancel any selections made within the File Selector, click on Cancel.

A file name may have up to 30 characters. We recommend that if you are going to be exporting files to the IBM PC, Macintosh, or Atari ST, that you name your files using the standard naming convention of 8 alpha-numeric characters, followed by a period, then a 3 character file extension. For example: SMALLCAT.TIF

Here are standard file extensions:

IFF - IFF-ILBM Interchange Format Files-InterLeaved Bit-Map format
IMG - Digital Research bit-image format
MAC - Macintosh bit-image format
PCX - Z-Soft PC Paintbrush bit-image format
PI3 - Degas monochrome bit-image format
TIF - Tagged Image File format

Directory Window

The *Directory Window* lists all drawers and files contained in the drawer named on the path statement. Drawer names always appear first in the directory window and are preceded by a forwardslash. The window displays 8 names at a time. If more than 8 names (either drawers or files) are in the drawer, use the scroll bar to move up and down in the directory window.

To display the contents of a drawer, click on it with the left mouse button.

To close a drawer, click once on the Parent button.

The OK and Cancel buttons.

When the correct item has been selected, click on OK, or press Return, to confirm the choice. Double-clicking on a file name in the directory window also has the dual effect of selecting that item and confirming the selection.

Dialog Boxes

Touch-Up contains two types of dialog box, the information dialog and the data entry dialog. To remove an information dialog from the screen after you have read it, click on the OK button or press Return. Some information dialogs have other buttons in place of OK, but in these cases their use is self-explanatory.

Data entry dialogs require you to enter items of information or make selections by clicking on the appropriate boxes. Edit lines of text by clicking on them or using the arrow keys or the [Tab] to position the cursor at the correct point. [Delete] or [Backspace] can then be used to remove unwanted characters before new text is entered. If you wish to delete a whole line of text, position the cursor on the line, then press [Esc]. When the entries are correct, click on OK.

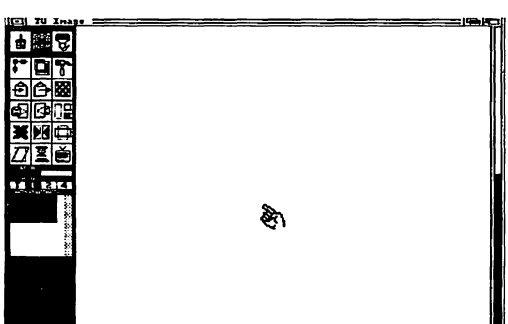
Note: There may be times when you have selected a command which should bring up a dialog box and it doesn't appear. When this happens an alert should appear which states there is not enough memory. In this case you will need to shut down all other applications to provide additional memory for Touch-Up.

4. Quick Start

The easiest way to become familiar with a program is to begin using it. This chapter leads you through a step by step tutorial using a sample image located on your Master Disk. When you've finished, you should have a good idea of how Touch-Up works and how to use the interface.

This tutorial assumes that you have either installed Touch-Up on a hard drive, or that the Master disk is in drive A:.

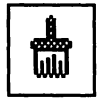
[1] Double-click on Touch-Up's icon. The following screen will appear.



[2] Select Load IFF from the File menu. The File Selector will appear. Select the file INTROPIC.IFF from the Master Disk and click OK. The sample file will then load into Touch-Up.

Notice that Touch-Up loads and saves many different file formats from different platforms. This allows you to take advantage of art from multiple sources, and to also bring images that you've edited across to other platforms.

[3] Click on the Paint Mode icon



[4] The Eraser is the current selected tool.

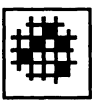
[5] Move the mouse to the image area. Hold the shift key down while dragging the mouse. This changes the size of the eraser.

All of the brush tools in Paint mode are user defined. You are not limited to a specific size or shape. You determine it. This is particularly useful when you want to work with very small or very large areas.

[6] Release the shift key; then move the mouse while pressing the left mouse button. The image will be erased anywhere the eraser touches. To change the shape of the eraser, hold the shift key down again.

[7] Release the shift key and left mouse button, and press and release the Undo key. The last bit of erasing that you did will be undone. Now, hold down the shift key and then press Undo. Any erasing you did will be undone, because shift Undo undoes all work back to either the last time you entered Paint mode, or until you used the locator to view another part of the image.

[8] Click on the FatBits icon.



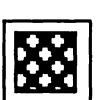
The mouse will turn into a small wireframe box. Use this box to select an area of the image that you would like to magnify and edit, then click the left mouse button.

The screen will change and the area defined by the box will be magnified. The original portion of the image appears in the upper left corner of the screen. FatBits allows you to edit any portion of the image on a pixel level. To edit, move the mouse over a white pixel, press the left mouse button and move the mouse. Any pixels it touches will turn black. To turn a black pixel white, release the mouse button, move the mouse over a black pixel and press the left mouse button again.

Notice that as you edit the image, the changes appear simultaneously in the copy of the image in the upper left. This allows you to see exactly how the changes you are making will affect the image.

[9] To save the changes, and return to the other screen, click the right mouse button. To get out of FatBits without keeping any of the changes, hit the Escape key.

[10] Click on the Pattern icon.

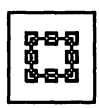


Select a pattern from the menu by clicking on it.

[11] Click on the Fill icon.

Move the mouse to an enclosed area (like the Touch-Up machine) and click the left mouse button, making sure to place tip of the paint pouring from the can inside the area.

[12] Select the black pattern and fill another area of the image with it. (Just for a later part of this exercise.)

[13] Click on the Clip mode icon. 

The screen will change and a clip box will appear in the upper left hand corner. The clip box is used to select part or all of the image that you wish to edit using one of the tools in Clip mode. The part of the image inside the clip box is the area that will be affected.

[14] Move the mouse inside the clip box, and while depressing the left mouse button, move the mouse. A hand will appear and the clip box will move as you move the mouse. Position the clip box over any area of the image and release the left mouse button.

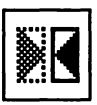
[15] Move the mouse over one of the polymarkers on the clip box, and drag the mouse. This is how to size the clip box.

[16] Click on the Writing Mode icon.

A menu will appear, select Transparent by clicking on it. The writing mode changes how different image operations interact with the current image on

the page. Using different writing modes for different operations can create some very special effects.

[17] Click on the Mirror icon.



A menu will appear offering the choice to mirror the image in the clip box to the Left, Right, Up, or Down. Click on your choice to select it. Notice that the mirrored area is transparent to the image already on the page. That is because the current writing mode is transparent.

[18] Move the clip box to encompass the area you filled with solid black in Paint mode.

[19] Click on the Process icon and select Outline from the menu choices.

The area in the clip box will now be outlined. At this point, you could fill it with a different pattern. Using the outline command is a handy way to give a new look to clip art that is made of areas of solid black and white.

[20] Move the mouse to the locator.

Drag the black box and release the left mouse button. A new part of the image will appear on the screen. The locator shows you the portion of the current image visible on the screen in relation to the area of the entire image. Moving the black box allows you to scroll to other parts of the image quickly and easily. Instead of the locator, you could also use the slider bars found to the right and bottom of the image.

Feel free to experiment and try other tools in the different modes. Several of the tools are common to more than one mode and a detailed explanation of these can be found in the Common Tools chapter. Descriptions of all other tools can be found under the mode in which the tool is located.

5. Common Tools

This chapter contains descriptions of the tools that are common to several modes in Touch-Up. The modes containing the tool are listed in parenthesis next to the tool name.

Writing Modes (Paint, Clip, Scan)

This command alters the way the objects you are drawing mix with the image already on the drawing surface. When you click on the Writing Mode icon, a menu will appear offering these choices: Replace, Transparent, XOR, and Reverse Transparent.

Replace - when you create something with Replace mode in effect, it replaces whatever is beneath it.

Transparent - when you create something with Transparent mode in effect, the object you created becomes transparent. When the object is pasted down, only the black areas of the object replace the image underneath.

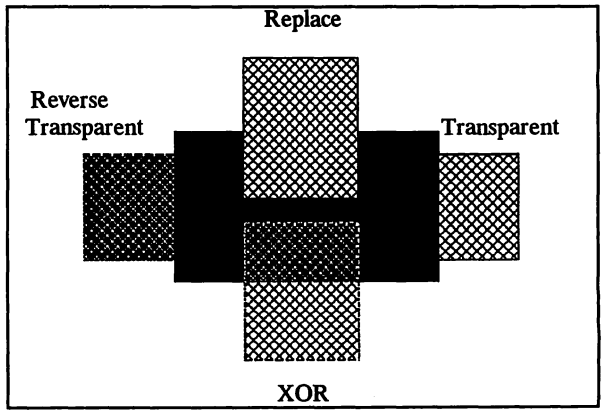
XOR - when you create something with XOR mode, the object you created mixes with the screen image in this way: whatever is black in the object you created will turn white wherever it crosses something that is black. And whatever is white in the object you created, will turn black whenever it crosses something that is white. If the current object does not come in

contact with another part of the image, then it will look just like it would if replace mode was in effect, except for the edge.

Note: We recommend that when using XOR mode you turn the object edge off.

RTransparent - when you create something with Rtransparent (reverse transparent) mode in effect, the object is first inverted and then the areas that are now white become transparent, allowing you to see thru them. If the object you create does not come in contact with another part of the image, it will just look inverted.

This following illustration of the different writing modes allows you to visually see the different effects the modes produce.



Note: Each mode that contains the Writing mode command has tools that are affected by the current Writing mode setting, so it is useful to remember that whatever setting you choose in one mode is active in the others until you select a different one.

Miscellaneous Tools (Clip, Scan)

This icon offers a number of different tools that you'll use frequently. When you click on this icon, a menu will appear that offers these choices: Clear Page, Invert Page, Clip to Page, Defaults, Page/Clip, and Lock.

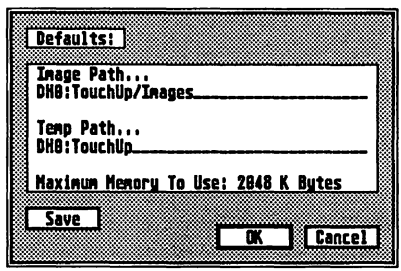
Clear Page - Click on this command to clear the whole page. An alert will appear that states you'll be erasing the current image. You may choose OK or Cancel. Depending on the size of the page you're clearing it may take a few moments to clear. When you use this command, your screen will be clear, but all the page and resolution settings will remain the same as well as the image name associated with the page.

Hint: You may find it quicker to use Clip to Page (to set the clip area to the full page) and hold down the shift key and hit the delete key to clear the clip box.

Invert Page - This command inverts the whole page. What is black will be white and vice versa.

Clip to Page - This command enlarges the clip area to the size of the full page. It is useful when you want to clear the whole page quickly or when you want to use one of the clip commands, such as stretch, across the whole image.

Defaults - This command brings up a dialog box that looks like this:



The Default box allows you to set the following: the default path for images, the location of the temporary file for the clipboard; the maximum amount of RAM memory that Touch-Up use for an image buffer when it initializes. The defaults are automatically set up for the drive that you loaded Touch-Up from, but you may change them as needed.

To change the default for all settings except Maximum Memory, follow these directions:

[1] Click on the name above the path i.e. Image Path. The File selector will appear. Choose the path and folder you want. Do not enter a file name as it will not be saved or recognized. You may also enter the path and folder names directly, although most times you will find it easier to use the File Selector.

[2] To change the information for the current session, but not make it the default, click on OK. To change the default file for the next time you run Touch-Up, but not the current session, click on Save, then click on Abort. This restores the path/folder to the original settings for the current session.

Note: When you use Save, all of the current settings in the icon pads become the default. Before clicking on Save, you may want to make sure color settings, etc. are how you would like them.

Because Touch-Up grabs the memory when it first starts up, the directions for altering the maximum memory setting are different.

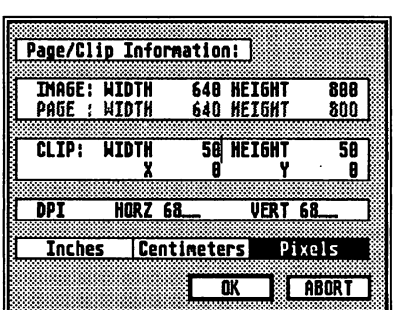
To change the Maximum Memory setting, follow these directions:

[1] Click on the value shown for Maximum Memory. Use the back-space key or the ESC key to delete the current value, then enter the value for the memory you want Touch-Up to use.

[2] Click on Save.

[3] Click on OK, then exit Touch-Up and rerun it. You must exit out of Touch-Up and rerun it for the new value to be used.

Page/Clip Info - This command brings up a dialog box which displays information on the current image, page and clip box. It also allows you to enlarge the image area for the current image, to set the image size and resolution when creating new images, and to set the clip box size. When you click on this command a dialog box will appear that looks like this:



When an image is loaded, its width and height are displayed here. Touch-Up's default unit of measurement is pixels, but you may also use inches or centimeters. To see the image size displayed in inches or centimeters, click

on the inches or centimeters button. Notice that the numbers change in the image information section as well as the clip box section. At any time you may change the unit of measurement by clicking on a new choice. You may also move the cursor from one value to another by using the up and down arrow keys.

Touch-Up has default page sizes for low, medium and high screen resolutions. Depending on which resolution you're using, the default will be a different number. When the image you're loading is smaller than the default, you will see the default page size displayed too. When the image is the exact size of the default or larger, then Touch-Up automatically adjusts the page size to match the image size and both values will be identical.

There may be times when you have loaded in an image and want to enlarge the image area. For instance, you may want to expand the image, increase the available work area, erase the current image and create a new one that is larger, or scan an image that is larger.

To enlarge the image area, follow these directions:

[1] Select the measurement unit you wish to use (pixels, inches, or centimeters). Note that the image width and height values will change if you selected a new measurement unit.

[2] Move the arrow over the Image width and click on it.

[3] Enter new values for the image width and height. To edit the values, press the escape key when the cursor is in the width or height field, then type in the new value.

[4] Click on OK or hit return.

At this point, an alert box will appear that asks if you would like to wipe or adjust the current image. Either choice will adjust the image area width and height while leaving the DPI values intact. Wiping will erase or white out the current image. Adjusting will reduce or enlarge the image area while trying to leave the original image intact. If the image is being

adjusted to a smaller area, it may lose some data on the right and/or bottom. If the area is being enlarged, white area will be added to the right and/or bottom of the image.

[5] Select Wipe or Adjust.

Creating a New Image

There will also be times when you will want to create a new image. If you've been editing some images and are now done with them, you should go to the Page/Clip info dialog box under the Miscellaneous Tools icon. Once there, you should select a new page size and click on OK. When asked to wipe or adjust, select wipe. You are now ready to create a new image.

Setting the Clip Box Size

The Page/Clip Info box displays information on the width and height of the current clip area. It also allows you to set the clip box size for loading images, performing special effects, and saving images. Setting the clip box size is particularly useful when you wish to match the clip box to the exact size of an image you'll be loading or when you want to save an area of the image at a width and height ratio that corresponds with the device you'll be printing on.

When loading or merging images, if the files are in IFF format, you may find it more convenient to use the IFF viewer to set the clip box size. If the image you wish to load is in another format, then set the clip box size using the Page/Clip dialog box. Make sure the measurement unit is pixels, then enter a width and height for the clip box. Once the clip box is the correct size, you may place it where you want before loading the image.

When saving a monochrome dithered image, we strongly recommend saving the image using the clip box and the Save Clip command. For directions

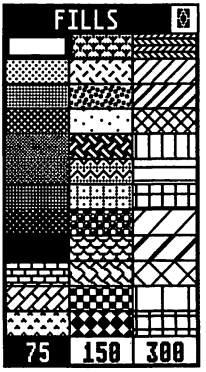
on using the clip box to save an image, please refer to the chapter on Saving Images.

Lock - This command is used to "lock" the polyline and sketch tool in Paint mode so that you cannot move the object once you have started creating it. The default for Lock mode is off. To turn Lock mode on, just click on it. Generally it will be turned off because it allows you more freedom when painting. Lock mode is especially helpful is when drawing polylines. When you want to create a polyline with Lock mode on, you may either click on the menu choice, or use the Ctrl L keyboard shortcut prior to painting. Both choices work as a toggle, so if the current setting is for Lock mode to be off, when you use Ctrl L, Lock mode will be on.

IFF Viewer - Use this command to view monochrome and greyscale images while in Touch-Up. This is especially handy when you have a lot of files and cannot remember what they look like. When you select this command the File Selector will appear. Enter the file information and click OK. The file will be loaded. To access all parts of the image, you may use the arrow keys or depress the left mouse button and move the mouse. To quit the viewer, hit the escape key or the right mouse button.

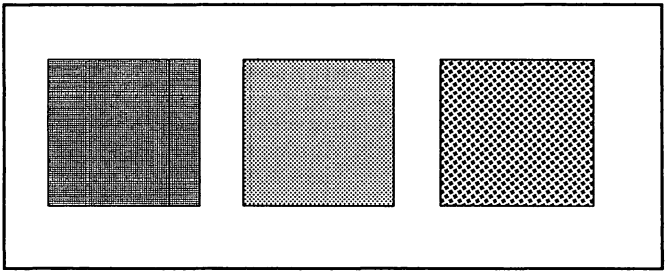
Patterns (Paint, Clip)

This menu provides 36 fill patterns that are used to fill objects, areas and text. When you click on this icon, a menu will appear that looks like this:



Select the pattern of your choice by clicking on it. This pattern will be used for all drawing and fills until you select another. Beneath the patterns are three buttons labeled 75, 150, and 300. These values refer to the resolution of your printing device. Many of the 150 and 300 fills are the same, but the gray scales differ. While patterns appear different in each resolution, you do not necessarily have to choose a pattern that corresponds to your device. If you will be using the images primarily on your screen, then choose the patterns that look good on the screen. If you are going to be printing your images, than select patterns that correspond to your printing device.

Below is a sample of a pattern and how it looks on the screen at the three resolutions.



You may move the Patterns menu anywhere on the screen by first selecting it. This may be a real convenience for you, especially if you are using a large screen monitor. A utility called AUTOPOINT (included with Workbench 2.0) automatically selects the window the mouse pointer is over, saving you extra mouse clicks.

Color Buttons

Touch-Up has on-screen icons for setting the painting and pattern colors. They can be used during editing when you may need to switch back and forth frequently between the two colors. You may set the colors to black or white by clicking on the appropriate icon. If you are unsure if you were on the correct icon when you clicked, you can click again on the color you want or you can check the menu under the Inkwell icon. Whenever you select a color using the color buttons, the change is automatically reflected in the Inkwell menu.

Note: When you want to use a different pen color than pattern color, or you wish to use the Opposite command, you must use the Inkwell menu or the Edit dropdown menu.

Zoom

Touch-Up uses four zoom levels: Full view, Normal, 2x and 4x. You may edit your image at any of these levels with the exception that Paint mode works only in Zoom Normal. To select a new zoom mode you may either use the drop down menu (current choice is signified with a check) or the on-screen icon to the left of the drawing area (current choice is black). To select a new zoom level, click on it. At zooms other than full, images with non-square (1:1 ratio) pixel aspect ratios may look extended.

Zoom Full - Use this command to display the whole image on the screen. Zoom Full tries to correct for the aspect ratio of the pixels in the original

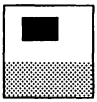
image and the aspect ratio of the screen pixels. At Zoom Full the image area is displayed against a dithered background so that you may see the borders of the image.

There may be some distortion of the image when viewing at Zoom Full, especially if the image is large. The distortion is just visual, and occurs when the program has to compress the image to fit on the screen. When color mapping, do not decide against a mapping method because of how the image appears at this zoom level. View it at Zoom Normal to get a more accurate representation.

Zoom Normal - Use this command to display the image at normal size. At Zoom Normal, one pixel on the screen is equivalent to one pixel in the original image.

Zoom 2x - Use this command to display and edit the image enlarged to twice the original size. At Zoom 2x, each pixel in the original image is represented by a 2x2 matrix.

Zoom 4x- Use this command to display and edit the image enlarged to four times the original size. At Zoom 4x, each pixel in the original image is represented by a 4x4 matrix.



Locator

The locator is an on-screen icon that allows you to see what percentage of the full page you're working on, and where on the page you're working. The white represents the page area. The black area represents the part of the page that is actually displayed on the screen. The black area will change when the window is sized or scrolled, or when a different zoom level is selected. You may also scroll the window by moving the mouse

over the black area, pressing down the left mouse button, and then dragging the black area. Many times this is quicker than using the scroll bars.

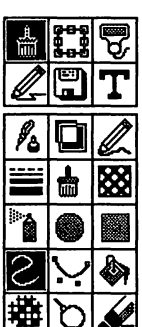
The locator is available in all modes. However, when you use the locator in Paint mode to scroll the image, the UNDO buffer starts over from the point that you move the locator. This is just as if you had exited Paint mode, scrolled the screen, and then re-entered Paint mode again.

6. Paint Mode

Paint mode is actually a fully featured paint program which allows access to all parts of the image. Paint mode offers simple brush shapes like circles and boxes and lets you size and shape them. Paint mode also has polyline, freehand sketch and spline brushes whose shape you create. This means you have an unlimited supply of brush tools at your disposal. You may create a tall thin brush, or an angled brush, or any shape you desire. Touch-Up remembers the brush shape too, so when you leave a tool and return, the last shape is automatically there for your use.

In Paint mode, everything you create is stored in a buffer. When you exit Paint mode or scroll the image using the locator, the information in the buffer is then pasted into the image. Because of this buffer, Paint mode offers several features which are not found in the other modes, making it one of the easiest modes to use.

When you select the Paint mode icon, the tool icon pad changes to look like this:



Note: Dropdown menus are not available in Paint mode. If you need to select one of the dropdown menu commands, select the Clip Mode icon, which will activate Clip Mode and enable the dropdown menus.

The icon pad contains commands which provide brush settings (line styles, widths, patterns, etc.), and commands for the brush tools. The icon for the currently selected brush is inverted. To select a different brush, click on it.

Each brush tool has an invisible mouse form associated with it. You can basically consider it to be the origination point for each brush. For instance, when you select the box tool and start to size it, the upper left point remains fixed while the rest of the box adjusts to the shape you desire. This point is where the mouse form is located. When you are sizing the box, you can move the mouse in such a way that the box flips, and the mouse form is in another location. Normally, there is no reason to watch where the mouse form for the brush is located, but occasionally when painting, there may be times when the brush will not go all the way to the edge of the work area. The invisible mouse form is actually bumping into the screen edge. To correct this, move the brush into the icon area; then move the mouse back onto the work area.

Paint mode has two types of brushes: simple and complex. Each brush always appears in the thinnest line style, with no pattern. When you begin painting with the brush, the copies will be drawn using all the line, pattern settings, etc. that you have set.

A brief description of simple and complex brushes is given here, but a detailed description of each command and how to use it can be found in the icon section of this chapter.

Simple Brushes

Simple brushes include circles and boxes. Each tool has a default brush shape defined before you use it for the first time. Thereafter, the program uses the last shape which you defined.

To use a simple brush, follow these directions:

[1] Select the brush by clicking on it. For this example, select the box tool.

[2] Move the mouse into the work area. Notice that the mouse turns into a box of predefined size with no pattern.

[3] Hold the shift key down, and drag the mouse. The size and shape of the box will change, depending on how you move the mouse.

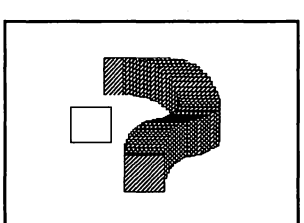
[4] Release the shift key and click once on the left mouse button. This creates one box. Notice that the copy has the current fill pattern and line style.

[5] Click on the Pattern menu; select a pattern.

[6] Move the mouse back into the image area and drag the mouse. Now you are painting with the brush shape you created. Move the mouse faster, then slower. Notice that depending on how fast you move the mouse, the boxes will be closer together or further apart.

You can resize and shape the brush at any time. Just release the left mouse button, then repeat the original process for shaping the brush.

[7] To begin painting again, just press the left mouse button and move the mouse.



When you are finished using this brush, you may select another. Before you begin to paint, you may select the line style, pattern, etc. that you want.

Complex Brushes

The complex brushes are sketch, polyline, B-Spline, Bezier curve, and Lasso. They differ from simple brushes in three ways. First, they do not have a predefined brush shape, you create it. Second, the brush may be returned to an undefined brush state by using the escape key. And third, there is more flexibility when editing the brush shape.

To create a complex brush, follow these directions:

[1] Select the brush by clicking on it. For this example, select the Sketch tool; then select Sketch from the pop up menu.

[2] Move the mouse onto the work area. To create the brush, press the left mouse button down and move the mouse. As you move the mouse, a sketch is created by continuous line segments.

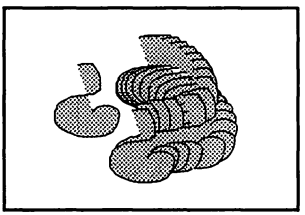
[3] Release the left mouse button and move the mouse. This allows you to move the sketch anywhere on the screen during the creation process. *At this point, the sketch has still not been created and cannot be used to paint with.*

[4] Click the right mouse button. This creates the sketch as a brush tool. With both mouse buttons up, you may move the sketch brush about the screen as you like.

Note: Once the brush has been created, you may return to an undefined state by hitting the escape key. This returns your mouse to the crosshair form.

[5] Click on the left mouse button once. This creates one copy of the paint brush. Notice that the copy uses the current fill pattern, line style, etc.

[6] Drag the mouse. You are now painting with the brush you created. You may stop painting by releasing the left mouse button, and continue painting by pressing down on it again.



[7] Move the mouse over to the icon pad and click on the box tool.

[8] Click on the sketch icon again. Select sketch from the pop-up menu.

Touch-Up always remembers the last shape you used for each brush. This applies to simple and complex brushes and is really handy, especially if you want to use that shape frequently.

The shape of a complex brush may be edited at any time, not just during creating. Notice the black square at the beginning point of the sketch. This marker highlights the current point of the brush and is used to edit the brush shape. The marker can be moved to any of the other points by using the arrow keys. The shape of the brush is edited by using the marker to move, insert and delete points.

To insert a point, move the marker where you want to insert a point. Hit the Insert key. This inserts a point *before* the current point the marker is over and also relocates the marker to *the new point.* Should you wish to use the previous point, you will need to move the marker back to it.

To delete a point, move the marker over the point you wish to delete using the left or right arrow keys. Hit the small Del (delete) key on the numeric keypad. The point will now be deleted.

Undo

Paint mode contains a buffer which allows you to have two undo options plus a paste feature for pasting work onto the page without leaving Paint mode.

Undo is a feature that comes in handy when your work is not to your liking. Undo allows you to "undo" or erase the last operation you performed, whether it was creating one box, or painting with one of the brush tools. To use this feature, hit the **DEL** key *at the top of the keyboard.* This key acts as a toggle, so if you hit the DEL key again, it would undo the undo. This can be handy if you accidently undo something by accident.

Shift-DEL will "undo" or erase all the operations since you:

a) last entered Paint Mode
b) pasted the buffer information onto your page by using the paste option
c) scrolled the image using the locator.

Shift-Delete should be used with caution, so you do not lose work unnecessarily.

Using the **F10** key while in Paint mode allows you to paste the information currently in the buffer onto the page. (It's just like leaving Paint mode and then returning.) This feature is great to use when you have created something that is just the way you want it. If you have used F10 to paste your work, the next time you use Shift-DEL, it won't erase work needlessly. Only work done after the pasting will be erased.

Note: An alternative to using the F10 paste option is to scroll the image using the locator, in that it also pastes the buffer information onto the page.

Paint Mode Icons

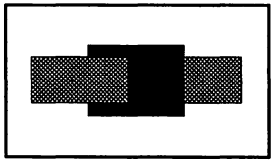
This section contains a listing of the icons in Paint mode and a description of each tool and how to use it.

Inkwell

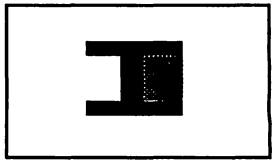
This tool sets the color you will be drawing with and the color of the patterns. The default is black. Click on this tool to bring up a menu that offers you the choice of Black, White or Opposite color for drawing, and Black or White for patterns.

Black and White for drawing work as you would expect: the outline of any object you draw will either be black or white based on your choice. Opposite works specifically with the Pen tool. When Opposite is in effect, when you start drawing on a white surface, the pen color will be black, and when you begin drawing on a black surface the pen color will be white. As long as the left mouse button is pressed down, whatever color you began drawing with will remain the current color. If you release the mouse button and start drawing again, this process repeats. This is handy when doing final touch-up work on an image.

Regarding pattern color, when you choose Black, the patterns appear as they normally do, with black lines and opaque white spaces in between them. Transparent (under the Writing icon) turns the white areas clear, allowing you to see through them. When you select a white pattern color however, the lines are white, as well as the areas between them, so the object you draw will look solid white. When you use Transparent though, the white lines remain and the white areas become clear, allowing you to see through them. The following examples will help you understand the difference.



Black Patterns



White Patterns

Being able to set the pen and pattern color allows you to create new combinations. For instance, you may create an object with a white outline and a black pattern, or vice versa. Notice however, that when you use white for the outline, it will look as though it is not there unless it is laid over or touches a darker area.

Hint: You may find it quicker to use the color buttons if you change colors frequently.

Writing Modes

This command alters the way the image you are painting mixes with the image already on the drawing surface. Specific information on this tool can be found in the Common Tools chapter.

Pen Tool

The pen tool offers the ability to draw freehand with a continuous or speed-variable dotted line. The pen tool has four preset widths that you select by using the 1-4 keys. The number 1 key provides the thinnest line, the number 4 key, the widest.

Using the pen tool is easy. Simply select the tool, press the left mouse button and draw. To change line widths, release the mouse button, select the new width by pressing the the key for the width you desire, and continue drawing.

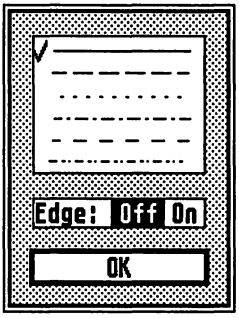
The number 1 width always produces a continuous line, regardless of how fast you move the mouse.

Line widths 2, 3, and 4 produce a line made of dots whose frequency varies with the speed with which you move the mouse. Unlike line width 1 which always produces a solid black line, line widths 2, 3, and 4 can be used like the spray tool to recreate any of the provided patterns. This can be quite handy when you want to fill an irregularly shaped area with a pattern. To use this option, select a pattern before using the pen tool, then "scribble" with the pen tool to see the pattern develop.

When you desire to use the pen tool without a pattern, make sure the pattern is set to solid black.

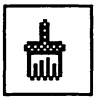
Line Styles

This command allows the selection of the line style used for creating brushes as well as whether the line edge is On or Off. When you select the line style icon, a box will appear that looks like this:



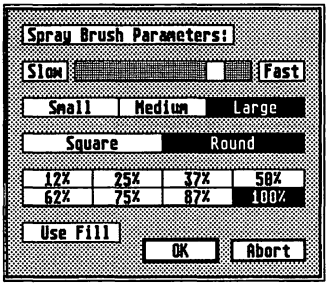
To change line styles, or to have the edge On or Off, click on your choice. Your choices will remain in effect until you change them.

Hint: To create a brush with no outline, turn Edge to "Off".



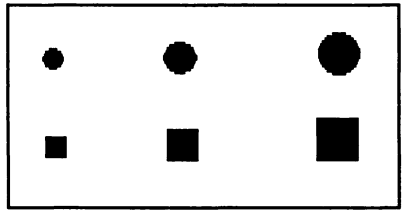
Spray Parameters

This command is used to set the parameters for the spray tool, including flow control, brush size and shape, maximum saturation, and whether to use the current fill pattern. When you click on this icon a dialog box will appear that looks like this:



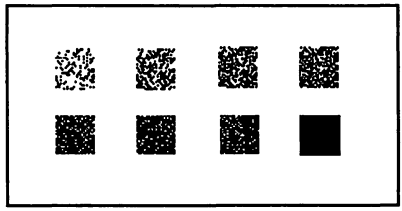
Touch-Up allows you to control the speed of the paint flow from the spray tool. The default is eighty percent of maximum. To adjust the flow, move the mouse over the scroll bar, and while pressing the left mouse button, drag the scroll bar to a new area. You may also click on either Slow or Fast to move the scroll bar all the way to the left or right, or click on the shaded area and that will move the scroll box too. Depending on where you move it, the flow will be slower or faster. Generally, you'll want to use a slower flow when you are working on fine or delicate areas of the image that require greater control. Faster rates are more suited to covering large areas quickly, where the spray does not need to be as precise.

There are three spray sizes to choose from: small, medium, and large (the default). The size you choose will depend on the image you're working on and the degree of control that you need. The sizes are shown below. You may also choose from either square or round (the default) brush types.



Spray sizes

The spray tool has eight saturation levels ranging from twelve to one hundred percent. Saturation is considered to be how much of an area is covered with paint when the spray tool remains in one location. The default saturation is one hundred percent. To select a new level, click on it.



Spray Saturation Levels

One of Touch-Up's unique features is that you may spray using fill patterns. By using the different saturation levels, you can create many interesting effects. For instance, you might use the patterns to highlight or shade an area rather than the normal spray. Touch-Up's default is to use

the normal spray pattern, so, to use the Fill option, click on it. Prior to using the spray tool, you must select the pattern you wish to use from the pattern menu.

After setting the various options in the Spray Parameter dialog box, click OK to use them, or Abort to reset them to their previous settings.

Note: You may save the settings in the Spray Parameter dialog box so they become the default. To do this, exit Paint mode and use the Defaults box under Miscellaneous Tools. Click on Save. The next time you reboot your system, your spray settings will be set to your saved values.

Patterns

This menu provides 36 fill patterns. A detailed description of this tool can be found in the Common Tools chapter.

Spray Tool

The spray tool is a very versatile tool which can create shading or gradation in an area using random dots or a pattern. It is easy to use and many times offers a greater degree of control than is possible with the other tools. Parameters for the spray tool are set in the Spray Parameters dialog box (described earlier). With this tool, you may blend areas, create mezzotint effects (gradation from light to dark), create textures, highlight and shade selected areas with patterns, and more.

To use the spray tool, follow these directions:

[1] Click on the spray tool icon. When the mouse is moved into the work area, it will turn into a spray can.

[2] Click once on the left mouse button. A spray will come out of the can in the current brush shape and size.

[3] Press the left mouse button down, (do not move the mouse) and hold it down until the spray area is completely filled. When the spray area stops getting darker, it has reached maximum saturation. For this example, the circle should be solid black.

[4] Now, press the left mouse button and move the mouse. A continuous spray will come from the can as long as the mouse button is pressed down. Move the mouse slowly, then faster. Notice that the spray saturation will be heavier or lighter, depending on how fast you move the mouse.

You may alter the spray at any time by changing settings in the spray dialog box.

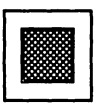
Hint: If you overspray an area, just respray the area using the opposite color.

Note: Remember you can undo the last operation using the DEL key. To undo further than that, use Shift-DEL.

Circle

The Circle command is used to create circles and ellipses. When you select this command, a menu appears that offers the choices of Circle or Ellipse. Select your choice by clicking on it. To size and shape the brush, hold

down the shift key while pressing the left mouse button, and move the mouse. To paint with the brush, release the shift key, then while pressing the left mouse button down, move the mouse.



Box

The Box command is used to create rectangular boxes. Like the ellipse tool, the shift key is held down during creation to size and shape the box. To create a box that is of equal width and height (square), with either type of corner, hold the Shift Alt keys during creation.

Sketch

This command is used to create freehand sketch and polyline brushes. Each is created using line segments and has a maximum of 127 line segments or 128 points. When you select this command, a menu offers you a choice of Sketch or Polyline. Click on your choice. Both use the current fill pattern. If you do not wish to use a pattern, prior to painting, select the white pattern from the pattern menu and set the writing mode to Transparent.

Creating a Sketch Brush

To create a freehand sketch brush, follow these directions:

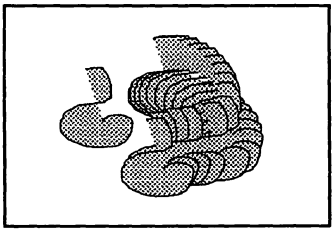
[1] Select the Sketch icon by clicking on it. Select Sketch from the pop-up menu.

[2] Move the mouse onto the work area. To create the sketch, press the left mouse button down and move the mouse. As you move the mouse, a sketch is created with continuous line segments.

[3] Release the left mouse button and move the mouse. This allows you to move the sketch anywhere on the screen during the creation process.

At this point, the sketch has still not been created and cannot be used for painting.

[4] Press once on the right mouse button. This creates the sketch as a brush tool which can be used for painting. To paint, move the mouse while pressing the left mouse button down. With both mouse buttons up, you may move the sketch brush about the screen as you like.



Note: Once the brush has been created, should you decide (at any time) that you don't like the shape, you may return to an undefined state by hitting the escape key. This returns the mouse to the crosshair form.

Creating a Polyline Brush

Polylines are used to create brushes of irregular shape. They may form a closed shape or may simply be a group of connected straight lines that form an open design such as a zig zag. Polyline brushes are created by drawing separate line segments in sequence (i.e from point A to point B to point C...). Whether it is open or closed, a polyline brush will fill areas of the design with the current fill pattern. If you desire no pattern, select the white pattern from the Pattern menu and Transparent from the Writing mode menu.

To create a polyline brush, follow these directions:

[1] Place your mouse where you want to start defining the brush shape.

[2] Drag the mouse to draw the first line segment. To end that line segment, release the left mouse button and press the right mouse button once.

[3] Continue using step 2 until you have created the shape you desire.

[4] Press the right mouse button twice to create the brush.

Because polylines often consist of many line segments, Touch-Up's freedom of movement when creating an object can sometimes be a hindrance. For these times we recommend using Lock mode (found under the Miscellaneous Tools icon/Edit menu). When Lock mode is in effect, the current selected drawing tool is "locked" so that you cannot move the object once you have started creating it.

Note: When you want to create a polyline with Lock mode on, you may also use the Ctrl L keyboard shortcut prior to drawing. This acts as a toggle, so if the current setting is for the Lock mode to be off, when you use these keys, Lock mode will be on.

Hint: There are times when an irregularly shaped eraser (like a wedge) works much better than a square or rectangle when you need to erase in an irregular

area (a person's profile for instance). For those times, we suggest that you use the Polyline tool to create the brush shape, and set the line style to edge "off". This creates a white brush with no outline that you can use as an eraser.

Adjusting and Editing Sketch Brushes

Once you have created a sketch or polyline brush, it may be adjusted and edited using the marker.

To adjust a sketch brush, follow these directions:

[1] Move the marker to the area you would like to adjust using the arrow keys.

[2] Hold the shift key down and while pressing the left mouse button, move the mouse. Notice that as you move the mouse, the point under the marker moves too. The amount the point moves depends on how far you move the mouse.

You may adjust any point on the brush by moving the marker to it. Being able to move the points and see them as they move makes it easy to achieve the brush shape you desire.You may also delete any point and insert additional points.

To delete a point, move the marker to the point you wish to delete and hit the Del (delete) key *on the numeric keypad.*

To insert a point, move the marker to the point *before which* you want to place the new point. Hit the Insert key (0 on the numeric keypad) to insert the point. The marker automatically moves to the new point. *Should you wish to move the original point, you must move the marker back to it.*

B-Spline and Bezier Curves

This command is used to create B-Spline and Bezier curve brushes. Both types are created by placing control points on the screen and then moving the control points to adjust the curve. While a curve looks like one continuous line, it is actually many small line segments connected together whose angles and directions change based on the location of the control points. Both curves have a maximum of 127 line segments or 128 points. When you select the Curve tool, a menu will appear offering the choice of B-Spline or Bezier curves. Choose one.

B-Splines can have up to 32 control points while Bezier curves are limited to four control points. Obviously, when more control points are used, more complex curves are possible. Both types use the current line style, pattern, etc. If you do not wish the curve to have a pattern, prior to painting, select white from the Pattern menu and Transparent as the writing mode.

Creating a B-Spline Brush

To create a B-Spline brush, follow these instructions:

[1] Select the Curve icon and click on B-Spline.

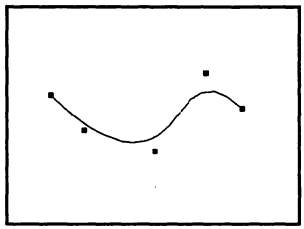
[2] Using the left mouse button, press once to put down a control point. Move the mouse and place four additional points. Notice that as soon as you place the second point, a line appears between them, and between each additional control point.

A curve appears on the screen as soon as there are three control points. With each additional point, the curve will adjust and look different. While the curve brush is shown during creation as a thin solid line, the curves painted on the page will reflect the current line style, pattern, etc.

[3] Hold down the shift key and while pressing the left mouse button, move the mouse. Using this method you may move the curve freely about the screen during creation. Release the button and shift key.

[4] Move the mouse over a control point, and while pressing the left mouse button down, move the mouse. This moves the control point and alters the shape of the curve. You may move any control point to any part of the screen and see the effect it has on the curve. Release the mouse button.

[5] Move the mouse over a control point and press the right mouse button. This deletes the control point. You may delete any control point this way.

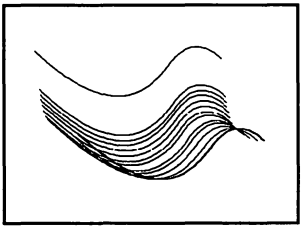


At this point, the curve is still not a brush and cannot be used for painting. Now is the best time to edit the curve because you can see all the changes as you make them.

[6] Release both mouse buttons and move the mouse away from the last control point. Press the right mouse button. This turns the curve into a brush which will be displayed using the maximum number of points.

Once the curve is a brush, the control points are replaced by the marker that signifies a complex brush. At this point you may click once to paint one copy of the curve. To paint with the brush, move the mouse while pressing the left mouse button down. When you paint, the curve uses the

current line style, pattern etc. At any point, you may go back to the tool icon pad and change any of the settings.



Note: Once the curve is a brush, if you do not like the shape you may either adjust it (directions later in this section) or use the escape key to abort out of the curve and return to an undefined state.

Note: Remember that once you begin painting, you may use the DEL key to undo the last operation.

Creating a Bezier Curve Brush

Bezier curves are created in much the same way as B-Spline, but are limited to four control points.

To create a Bezier curve brush, follow these directions:

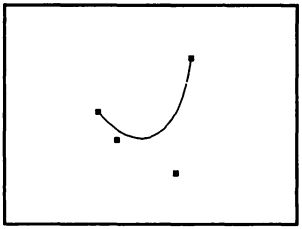
[1] Select the curve icon, and click on Bezier.

[2] Using the left mouse button, click once to put a control point down. Move the mouse and place three additional points.

The curve will appear on screen as soon as four control points have been placed.

[3] Hold down the shift key, and drag the mouse. The curve moves as you move the mouse. You may move it anywhere on the screen.

[4] Release the shift key and left mouse button. Move the mouse to a control point, and drag the mouse. This moves the control point and alters the shape of the curve. You may move any of the control points this way.



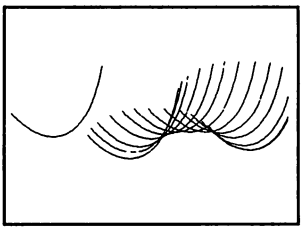
At this point, the curve is still not a brush and cannot be used for painting. This is the best time to change the shape of the curve because you can see changes as you make them.

[5] Move the mouse away from the control points and press once on the right mouse button.

The four control points will be replaced with a marker which signifies a complex brush. It can now be used for painting and is displayed using the maximum number of points.

[6] Click once on the left mouse button to make one copy of the curve.

[7] While pressing the left mouse button down, move the mouse. You are now painting with the curve brush. Notice that the curves you have painted use the current line style, pattern etc. At any point during creation or while painting, you may go to the tool icon pad and change the settings.



Note: Once the curve is a brush, if you do not like the shape you may either adjust it (directions later in this section) or use the escape key to abort out of the curve and return to an undefined state.

Adjusting the Shape of a Curve Brush

Once you have created a B-Spline brush, you may still adjust it and edit the points. Bezier curves may only be adjusted, as they are fixed at four points.

To adjust a curve brush, follow these directions:

[1] Using the arrow keys, move the marker to the area you wish to adjust.

[2] Hold the shift key down, and while pressing the left mouse button, move the mouse. The curve will be updated as you move the marker.

[3] Release the mouse button.

You may adjust either curve in this way. If you'd prefer to see the curve as it changes shape, you must make the changes before you turn it into a brush.

Fill

This command is used to fill solid black or white areas of the screen with one of the 36 fill patterns. Fills are most often used for enclosed areas and can be used when creating a new image or to enhance an old one after using the Outline feature.

To use the Fill command, follow these directions:

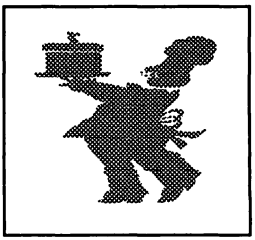
[1] Select the pattern and resolution you wish to use from the pattern dialog box.

[2] Click on the Fill icon. The mouse will turn into a paint can, whose hot spot is the tip of the paint dripping out of the can.

[3] Move the mouse to the area you wish to fill and click the left mouse button. The pattern will fill the area you selected.

Note: If you do not like the fill or if the fill escapes because the area was not completely enclosed, use the DEL key to undo the operation. Then use the FatBits tool to close the area, and redo the fill.

The fill in Paint stops when it hits a dot of the opposite color than it started on. This feature can be used to fill existing black areas. When you select a fill pattern and click on a black area, such as a thick line, the pattern inverts and fills the area. The following example illustrates this.



FatBits

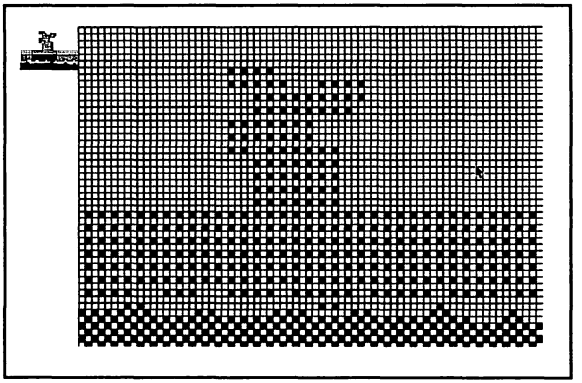
This tool is used to edit pixels in any area of the screen. When you click on this icon, a floating wireframe box will appear. Use the viewer to select an area of the screen you wish to edit. Once an area is selected, it will be enlarged on a grid. The magnified area is also displayed at normal size in the upper lefthand corner of the screen. When you have finished editing, you may return to the normal image and either choose another area to edit, or select another command.

To use the FatBits tool, follow these directions:

[1] Click on the FatBits icon and move the mouse into the work area.

The mouse appears as a small square. This is the viewer, which has a fixed size.

[2] With both mouse buttons up, move the viewer to any part of the image on the screen. Click the left mouse button.



The portion of the image that was in the viewer is enlarged on a grid. The portion of the image that you enlarged is displayed to the left of the image area and will reflect all changes that you make.

[3] Move the mouse over a black dot and click once with the left mouse button. Release the mouse button.

[4] Move the mouse over a white dot and click once with the left mouse button. Release the mouse button.

When you start drawing over a black dot, the pen draws in white. When you begin drawing over a white dot, the pen draws in black. You may edit individual dots by clicking on them or you may move the mouse while pressing the left mouse button down.

[5] Move the mouse while pressing down on the left mouse button and fill in an area of the image.

[6] Release the left mouse button; then press the right mouse button.

This will take you out of FatBits mode and return you to the image. The viewer will still be on the screen. You may either select a new area to edit, or select another command.

To draw horizontal lines in FatBits mode (black or white), press the Shift key before drawing the line. To draw vertical lines, press the Alt key before drawing the line.

Note: Hitting the escape key while in FatBits will abort you out of the command. When you abort, any changes you made are not saved.

Lasso

Note: On low memory systems, this tool may be disabled.

This command is used to select an area of the screen that you wish to use as a brush. This is an excellent tool that can be used to create hundreds of new designs and textures. Lasso works somewhat differently from the other brushes in that rather than having a separate command for sketch and polyline lassos, it allows you to use both methods of creation. Depending on what you want to lasso, you may use sketch for part and polylines for part.

To create a lasso brush, follow these directions: (These directions assume you already have an image on your page.)

[1] Click on the Lasso icon and move the mouse to the area you wish to lasso.

[2] While pressing the left mouse button, move the mouse around the area you want. For this example, draw a semicircle. Release the left mouse button.

At this point, you may either continue using sketch, or use polylines to continue the lasso.

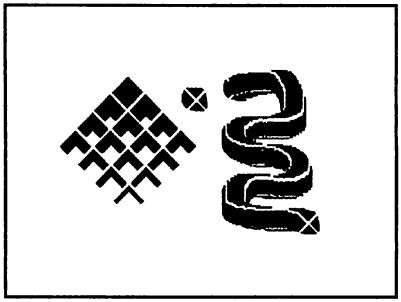
[3] To use polylines, with both mouse buttons up, move the mouse to a new location. Click the left mouse button to place a point.

[4] Continue step 3 and create two more line segments. Release the left mouse button.

[5] Finish the lasso by dragging the mouse until the lasso is closed.

[6] Release the left mouse button and press on the right mouse button.

The lasso is now a brush and can be used for painting. To paint with the lasso, move the mouse while pressing down on the left mouse button. The following illustration shows the original image, the lasso brush, and painting done with the brush.



Note: The mouse form disappears when you are creating the lasso. If you pressed the left mouse button down, but have not moved the mouse, you may think that the program is "frozen". It isn't. Simply move the mouse and you will see the lasso being drawn.

Note: Once the lasso brush has been created, you may return to the undefined state by hitting the escape key.

Like the other tools, Lasso is affected by the writing modes (except Reverse Transparent). Using Lasso with Transparent or XOR can produce some very exciting results. Experiment using lasso with the different writing modes. The same brush that produces mediocre results with Replace mode may look great using XOR.

Eraser

This command is used to create a sizeable eraser that you can use to quickly erase large or small areas of the image.

To use the eraser, follow these directions:

[1] Click on the Eraser icon. When you move the mouse into the work area, a small square will appear. This is the eraser.

[2] Hold the shift key down, and drag the mouse to change the size and shape of the eraser.

[3] Release the shift key, then while pressing on the left mouse button, move the mouse. The eraser will erase any black areas it touches.

The eraser works well for areas that need to be erased quickly. For fine work requiring control, we recommend you use the FatBits mode.

Note: Should you erase anything you did not mean to, use the DEL key to undo the last operation. Should you wish to "undo" your undo, hit the DEL key again. (The DEL key acts as a toggle.)

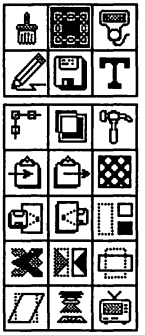
Hint: When you need to erase an area that borders a long vertical or horizontal area of the image, first size your eraser so that it is parallel to the section that you are going to erase; then simply drag the eraser slowly against the complete area at one time.

There are times when an irregularly shaped eraser (like a wedge) works much better than a square or rectangle when you need to erase in an irregular area (a person's profile for instance). For those times, we suggest that you use the Polyline tool to create the brush shape, and set the line style to Edge "off". This creates a white brush with no outline that you can use as an eraser.

You may use any brush tool as an eraser by turning edge to 'Off' and using a white fill pattern.

7. Clip Mode

Clip mode allows you to select any portion of the screen, including the whole screen, and modify it with special effects such as flip, mirror, slant, outline etc. When you click on the Clip icon in the mode icon pad, the tool icon pad will change to reflect the new tools and commands. The Clip mode icon pad looks like this:

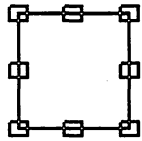


Like other modes, many commands in Clip mode are affected by the current writing mode. Operations such as moving and copying the clip area are also affected by the writing mode. Those commands affected by the writing mode are annotated.

Note: Different operations and commands in Clip mode such as move, copy, stretch and slant clip area can be aborted by pressing both mouse buttons simultaneously.

How to Use the Clip Box

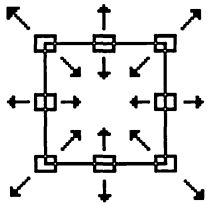
When you select Clip mode for the first time when running Touch-Up, or after loading a new image, a box will appear in the upper lefthand corner of the page that looks like this:



This is the clip box and its purpose is to define the clip area of your image. The small squares on the clip box are polymarkers and are used to alter the size of the clip box. After you have used the clip box once, whenever you enter Clip mode, it will always reappear in its previous size and location, except after you load a new image, when it will again appear in the upper lefthand corner.

Sizing the Clip Box

You may change the shape of the clip box by placing the mouse inside one of the polymarkers, and while holding the left mouse button down, drag the polymarker. The box can stretch smaller or larger depending on the direction you move the mouse. The illustration below shows in what directions each polymarker may move.

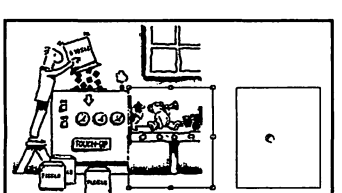


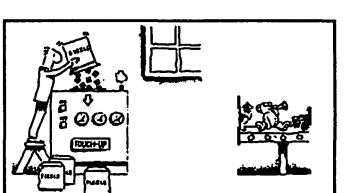
Moving the Clip Box

To move the clip box, place the mouse within it and then move the mouse while depressing the left mouse button. A hand will appear in the box while you are moving it. Move the box where you want, then release the mouse button to place it on the page. Rather than moving the clip box, sometimes you may find it easier to create a new one. To do this, move the mouse to the area where you wish to create the new box, and drag the mouse. You will see the clip box being created as you move the mouse and the previous one disappears. To place the box on the page, release the mouse button. Note that you cannot create a clip box inside the area of the current clip box.

Moving the Clip Area

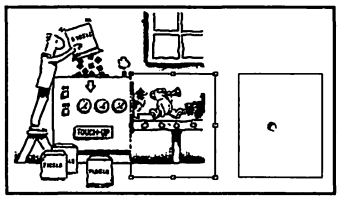
You may move and copy the part of the image that is contained in the clip area to other locations on the page. To move a clip area, hold down the *shift* key while moving the clip box. When the clip area is positioned to your liking, release the left mouse button. This pastes the clip area onto the page. Depending on the current writing mode, the clip area will mix with the image in different ways. Notice also, that the area the clip came from is now empty.

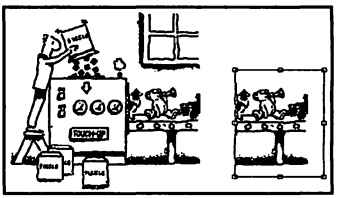




Copying the Clip Area

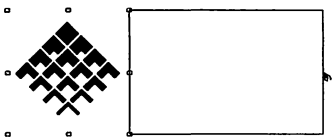
To make a copy of the image contained in the clip area, hold down the *control* key while moving the clip box. Move the mouse and release the mouse button when the copy is in position. Notice that the clip box is now positioned over the copy. To have the clip box remain in the original clip area, hold down both the *control and Alt* keys while making the copy. When copying the clip area, please note that only the copy, and not the original area, is affected by the current writing mode. The example below shows a copy of the clip area while in Replace mode.

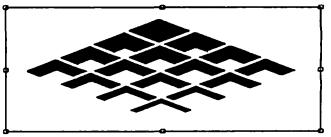




Stretching the Clip Area

To stretch the image contained in the clip area, hold down the *shift* key while dragging one of the polymarkers on the clip box. When you release the mouse button, the image will be stretched in the desired direction(s). Please note that the stretch operation is **not** effected by the current writing mode.





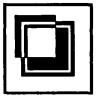
Clip Mode Icons

This section contains a listing of the icons in Clip mode and a description of each tool and how to use it.

Clip Box

The clip box command is used to show and hide the clip box. When the clip box is not currently displayed on the screen, click on this icon to redisplay it. The first time you use the clip command, it will appear in the upper lefthand corner of the page. The clip box will automatically appear when you return to the Clip mode after being in one of the other modes.

To hide the clip box, click on the icon; or if the clip box is smaller than the displayed area, you can click once somewhere outside the clip box. When you have enlarged the clip box to full page size and wish to use a smaller one, rather than using the polymarkers to reduce the size, click on the clip area icon to remove the box, then create a new one.



Writing Modes

This command alters the way the image in the clip area mixes with the image already on the drawing surface. As in other modes, the current writing mode affects many of the commands in Clip mode, such as mirror and rotate, as well as moving and copying the clip area. For a more detailed description of the modes and how they effect the image, please refer to the Writing Mode command in the Common Tools chapter.

Miscellaneous Tools

This icon offers a number of different tools that you'll use frequently. For a more detailed description, please refer to the Miscellaneous Tools command in the Common Tools chapter.

Cut Clip Area to Clipboard

This command is used to temporarily save the clip area to a file on your hard or floppy disk named CLPBOARD.TMP. Use this command like you would a clip board for moving clip areas around the page. To use the clip board simply select a clip area and click on the icon. The clip area will automatically be saved to the file. The clip board is only one layer deep however, so it will hold only one file at a time. Should you forget and place a new image on the clipboard, it will overwrite the previous one. When you quit Touch-Up, the temporary file is automatically deleted from your disk.

To use the clipboard as a copy tool, follow these instructions:

[1] Select the clip area you wish to copy.

[2] Click on the Save to Clipboard icon.

[3] Return to your page and scroll to the area where you want to place the copy.

[4] Click on the Paste Image from Clipboard icon. A box will appear that is the size of the clip area you saved. Move the box to the place you desire and click the right mouse button to paste the clip area on the page.

Since the Paste Image from Clipboard command creates a copy of the image in the clipboard, you may use this command to create as many copies you like.

Paste Image from Clipboard

This command is used to paste a copy of the image that is temporarily stored on the clipboard. When you wish to remove the image from the clipboard, click the left mouse button down on the icon. A box appears that is the exact size of the clip area that was saved. With both buttons up, move the box to the location you desire, then paste it down by clicking the right mouse button. Notice that the writing mode effects the area where you pasted the copy.

Note: You may abort a paste by pressing both mouse buttons. Make sure you press the left button first.

Patterns

This command is used with the Mask tool found under the Process Clip command. For a more detailed description of this tool, please refer to the Common Tools chapter.

Load Clip Area

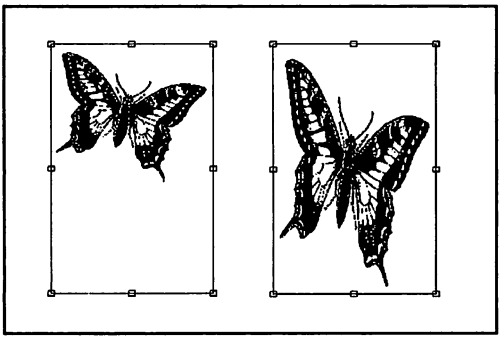
This command is used to load a monochrome IFF or IMG file into the clip box.

Note: This command is meant to be used with monochrome IFF files that were either scanned or created in Touch-Up. Color IFF files that have been converted to monochrome may look distorted when loaded into a clip area.

When you click on this command a menu appears that offers you the choice of IFF or IMG, and Preserve Aspect Ratio or Ignore for both. This determines how the image will appear when loaded. Preserve Aspect Ratio is the default and preserves the image in direct proportion to the original. Because of this, the image may not use the full clip area. Ignore Aspect Ratio allows the image to distort so that it fills the entire clip area. Depending on the size and shape of the original image, and the size and shape of the clip area, it may or may not look distorted when loaded. If the image's appearance is not to your liking, you can always change the shape of the clip area and reload the image using Preserve or Ignore.

After selecting Preserve or Ignore, the File Selector will appear. Choose the image you would like to load and click OK. Your image will then load into the clip area. Like other commands in Clip mode, loading a file into the clip area is affected by the current writing mode. When Replace mode is in effect and Ignore Aspect Ratio is chosen, the entire clip area is cleared and the new image loaded into the whole area. When Preserve Aspect Ratio is chosen, then only the area that the image uses will be cleared and replaced in the clip area. When Transparent is in effect, the new image becomes transparent whether Preserve or Ignore is used.

The illustration below shows an image loaded into a clip area using Preserve and Ignore.



Using the writing modes can be an advantage, especially when trying to create special effects. For instance, you may want to merge an image using transparent or XOR mode.

To merge an image with another, follow these directions, (this example assumes you already have an image on the page):

[1] Select the writing mode you wish to use. (Use transparent for this example.)

[2] Set the clip box to the exact size of the image you want to merge, either manually using the Page/Clip box, or by using the Set Clip option in the IFF Viewer if you are using an IFF file.

[3] Move the clip box to the desired location. (For this example, make sure it overlaps part of the current image.)

[4] Click on the load Clip Area icon. Then select the format and file you wish to load.

Save Clip Area

This command is used to save the clip area as a compressed IFF file or other format. After clicking on this icon, a menu appears that offers these save formats: IFF-ILBM, IMG, PCX, TIFF, Degas, GIF, MacPaint, and PrintMaster. Once you click on the format you desire the File Selector will appear. Enter the file name and click OK. The clip is saved in the format, name and location you specify.

When saving a clip area in MacPaint and Printmaster formats, the area saved may be larger or smaller than the clip area depending on the size of the clip box. This is because both MacPaint and Printmaster formats save a specific size image.

To see the size of the area to be saved, select **Ctrl A** for MacPaint or **Ctrl P** for Printmaster 1 wide or **Ctrl M** for Printmaster 3 wide. This alters the clip box size according to the selected format. You may then move the clip box so that it encompasses the area you want to save.

When you select a clip area smaller than the size for the format (MacPaint, for instance), the image within the clip area will appear in the upper left-hand portion of the image and the remaining area will be white.

When you select a clip area larger than the size for the format, the image will be saved starting in the upper left-hand corner of the clip box. As much of the image will be saved as fits into that format's size.

Saving in MacPaint Format

To save a clip area in MacPaint format, follow these directions:

[1] Select the clip area you wish to save by drawing the clip box or by using the Ctrl A keys to set the size. Then move the clip box to the area you wish to save.

[2] Select Save Clip Area under the File menu. Then select MacPaint from the Misc. Tools menu. The File Selector will appear.

[3] Enter or select the name of the file and click OK.

Saving in Printmaster Format

To save a clip area in Printmaster format, follow these directions:

[1] Select the clip area you wish to save by either:
a) drawing the clip box

b) by using the Ctrl P keys to set the size to Printmaster 1 wide, then moving the clip box to the area you wish to save

c) by using the Ctrl M keys to set the size to Printmaster 3 wide, then moving the clip box to the area you wish to save

[2] Select Save Clip Area under the File menu. Then select Printmaster from the Misc. Tools menu. The File Selector will appear.

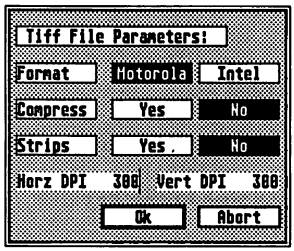
[3] Enter or select the name of the Printmaster shape directory file and click OK.

[4] A dialog box appears in which you specify 1-wide or 3-wide. Based upon your choice, enter one or three icon names to be added to the shape directory.

Note: Some applications that load PCX format require that the picture size be based on units of 16 pixels. If your application is like this, hold the Shift key down while saving in PCX. Touch-Up will calculate the pixel size for you and adjust the image accordingly.

Saving the Clip Area in TIFF Format

All formats except TIF save directly. When you select the TIF format, an additional dialog box will appear that looks like this:



This dialog box allows you to choose the TIF format, either Motorola (for the Amiga, Macintosh and Atari ST) or Intel (for the IBM), and other information that may be saved with the file for use in Desktop publishing programs.

To use the TIF dialog box, follow these directions:

[1] Select the .TIF format you desire, either Motorola (the default) or Intel.

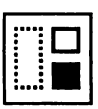
[2] Select whether you want the file saved in compressed or non compressed format. If the publishing program you're using loads compressed files, always select compressed because the file size is much smaller. If it does not, choose uncompressed.

[3] Select whether the file information is saved in vertical strips or not. Again this pertains to the publishing product you're using. If it will load stripped files, then choose this option. It will only increase the file size slightly, but should speed up the screen display in your publishing product.

[4] Enter the DPI for your image if you desire to alter it from the current values. Touch-Up automatically inserts the DPI of the current image. Again, this information is only for use with desktop publishing programs. Check your documentation to see whether your program uses it; if not, then you can ignore this setting.

[5] Click OK when you are done. The File Selector will appear.

[6] Enter the name of the file and click OK.



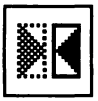
Clip Box Colors

This command is used to either invert the clip box or to flood it with solid black or white. When you click on this icon, a menu will appear that offers you the choice of White, Black, or Invert. Use White when you want to clear the clip area. Use Black for a quick solid black area. Use Invert when you want to invert the image in the area (i.e. what was white will be black and vice versa). Choose invert again to return it to its original state.

Hint: A quick way to clear the clip area or turn it white is to hold the shift key and press the delete key when the clip box is displayed.

Flip

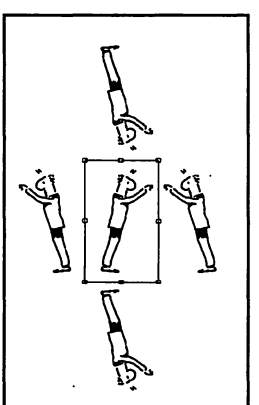
This command is used to flip the image in the clip area. When you click on this icon a menu appears that offers you the choice to flip the clip area Horizontally, Vertically or Both. Click on your choice and the image in the clip box will be flipped. Select Both to rotate the clip area by one hundred eighty degrees. Note that Flip *is not* affected by the Writing mode.



Mirror

This command is used to mirror the image in the clip area. When you click on this command a menu will appear that offers you the choice to mirror the clip area to the Left, Right, Up or Down. When you use mirror, note that the current writing mode *will affect* how the mirrored section looks. For instance, when Replace is the current writing mode, the mirrored section replaces that area of the page; when Transparent is in effect, the mirrored section is transparent.

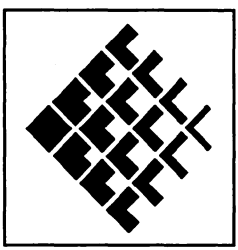
You may perform tiling with the mirror command, by holding down the *shift* key while mirroring. When tiling, the mirrored section becomes the current clip area, making it easy to form a continuous line or design using the clip area. This is a great time saver when creating borders or frames.



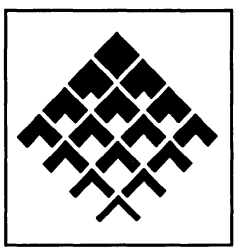
Rotate

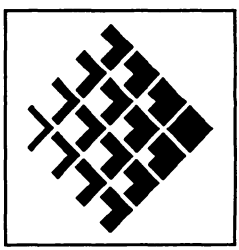
This command is used to rotate the clip area or the full page. When you click on this icon a menu appears that offers you the following choices:

Clip Degrees	- rotates the clip area by degree increments
Clip Left	- rotates the clip area counterclockwise by 90 degrees
Clip Right	- rotates the clip area clockwise by 90 degrees
Clip 180	- rotates the clip area by 180 degrees
Page Left	- rotates the whole page counterclockwise by 90 degrees
Page Right	- rotates the whole page clockwise by 90 degrees



Clip Left





Clip Right

Clip Degrees

You may rotate the clip area about a user defined point by degree or tenth of a degree increments using the Clip Degrees command. When you select this command a dialog box appears at the top of the screen and the clip box turns into a wire frame box with a crosshair at the center. The crosshair is used to determine the center of rotation, or the point that the clip area is rotated about. The dialog box reflects the current degree of rotation as well as providing rotate, rotate copy, and cancel buttons.

Rotation of a clip area can be quite time consuming, depending on the size and complexity of the clip area you have selected. If you are rotating a clip area or full page which is larger than the screen at zoom normal, Touch-Up will first look for available memory other than your image area in which to create the rotated version. If there is not enough memory available to do the rotation, and alert will appear which warns of using temporary disk storage.

Note: Floppy drive owners (who do not have a hard disk) should only use rotate when they have a large RAM disk that can be used for temporary storage. Be sure to specify the RAM disk as the location for the Temporary Path in the Defaults dialog box.

Note: If you have not saved your image recently and are experimenting with rotate by degree, it's a good idea to save the image before using rotate.

To rotate the clip area using Clip Degrees, follow these directions:

[1] Define the area you wish to rotate with a clip box.

[2] Click on the Rotate icon, and click on Clip Degrees. The clip area will turn into a wire frame box with a crosshair at the center, and a dialog box will appear at the top of the screen that looks like this:

[3] Press the right arrow key until the value in the dialog box reads 45 degrees. Notice that the wire frame box rotates as you change the degree, providing a visual display of where the clip area will be positioned.

[4] Click on Rotate. A dialog box will appear while Touch-Up calculates the rotation. A black line will move across the box during the calculation. When the rotation is finished, the rotated clip area will be displayed.

Changing the Center of Rotation

There may be times when you want to change the center of rotation. To do this, move the mouse to the crosshair center. Then, pressing the left mouse button down, drag the crosshair to a new location. Alter the degrees to the value you want and click on rotate. Touch-Up also offers these keyboard shortcuts for working with rotate:

<HOME>	To return the crosshair to the center of the clip area, press the <Home> key.
<F1>	To set the crosshair to the last origin used, press the F1 key.

To set the crosshair to the center of the screen, press the F2 key. This is useful when the last point of rotation is not visible on the current screen.

Changing the Degree of Rotation

You may use either the keyboard or the mouse to set the degree of rotation. Positive rotation angles result in a counter clockwise rotation. Negative rotation values result in a clockwise rotation of the clip area. The following keys are used to change the degree of rotation.

Left/Up arrow keys change the degree by -1 degree.
Right/Down arrow keys change the degree by +1 degree.
<Shift> plus the arrow keys (or depressing the left mouse button and moving the mouse) changes the degrees by 1/10th of a degree.

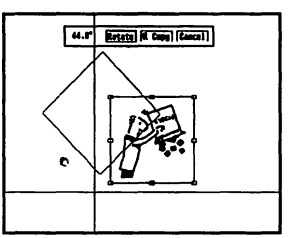
To change the degree of rotation by using the mouse, move the mouse away from the center of the crosshair and press and hold the left mouse button. As you move the mouse around the center of the crosshairs, the degree of rotation changes.

Note: When using large angles of rotation, it is easier to first use the mouse, and then use the arrow keys to fine tune the angle.

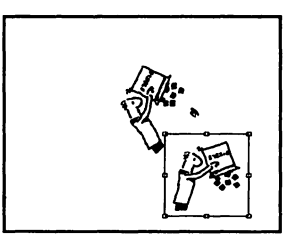
Rotating a Copy of the Clip Area

The rotation dialog box also offers the choice of rotating a copy of the clip area. When you use this option, the original clip area and wire frame box remain in the original position, and a copy of the clip area is rotated to the new position. This is quite handy when you want to rotate copies about a center point. To use this option, set the center and degree of rotation, then click on R copy. Touch-Up will then make a copy of the clip area and rotate it for you.

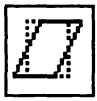
Note: When using R copy, we recommend that you move the center of rotation away from the center of the clip area. Otherwise, when you rotate the copy it will be placed over the original clip area.



Before Rotation



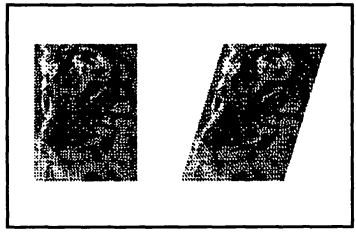
After Rotation



Slant

This command is used to slant the clip area either horizontally or vertically, and is not affected by the Writing modes. When you choose Horizontal, the clip box turns into a wire frame box whose bottom line is fixed. To slant the box, press and hold the left mouse button while moving the mouse. The box will slant to the left or right depending on how the mouse moves. When the box is at the desired angle, release the left mouse button and then press the right mouse button to paste it down. The clip area will then appear slanted. Notice only the wireframe box moves during slanting and not the image itself.

When you select Vertical, the left side of the wireframe box becomes fixed, allowing you to slant the box up or down. Slant is a versatile tool which lets you be creative with your images as well as text. The following examples show slanting horizontally.



You may abort out of this command by pressing both mouse buttons simultaneously, then releasing.

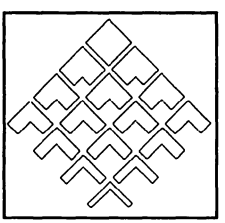
Hint: You may slant text by first creating the text, then placing each letter or the whole word/text line in a clip area. Then use slant to slant the clip area. If you want to slant individual letters, move them to a blank area of the page, slant them and then rearrange the letters.

Process

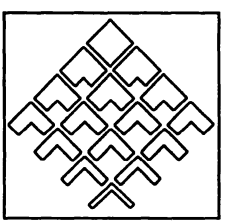
This command contains additional clip area tools that are especially helpful for creating special effects or when working with scanned images. When you click on this icon, a menu appears that offers you the choice of Bold, Clean-up, Outline, and Mask.

Bold

This command is used to make the image in the clip area bolder by adding additional pixels to the image. When you select this command, a dialog box will appear that offers you the choice of adding pixels in the Horizontal or Vertical direction, or Both. When you select Horizontal, a pixel will be added to the left and right side of every pixel. When you select Vertical, a pixel will be added above and below every pixel. Selecting Both places four pixels around each current pixel.



Before Bolding



After Bolding

Cleanup

Cleanup is a handy tool that will eliminate stray dots from the clip area. It is especially useful when cleaning up scanned images. A stray dot is considered to be any dot that is not touching another dot in any direction. When you click on this command another menu will appear offering the choice of White, Black, or Both. The choices work this way:

White - This choice eliminates all stray white dots from the clip area.

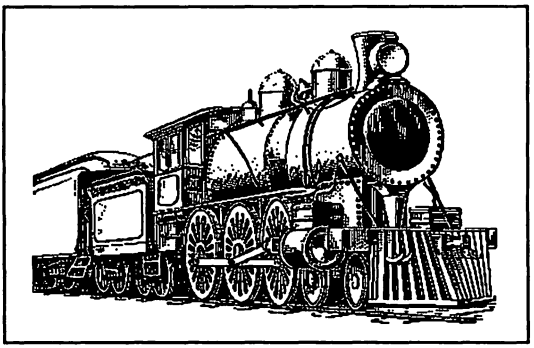
Black - This choice eliminates all stray black dots from the clip area.

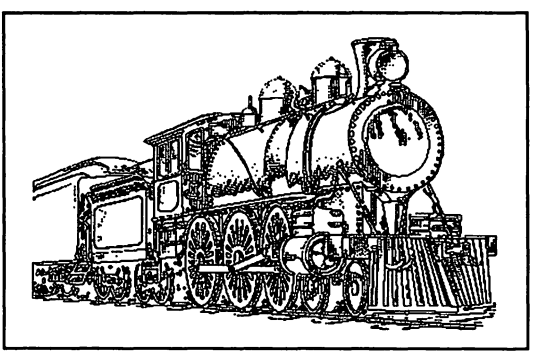
Both - This choice eliminates both white and black stray dots from the clip area.

Outline

This command is used to create an outline of any black area in the image contained in the clip box. This is particularly useful when you have an image that contains areas of solid black that you wish to fill with a pattern. (It's great for using on ready made clip art.) After using the Outline command, simply use the fill command in Paint mode to edit the image.

When you set the clip area and click on Outline, the command automatically outlines the image contained in the clip box. The following example illustrates this.





Hint: To make a box a specific size, follow these directions:

[1] Set the clip box to the exact size using the Page/Clip box.

[2] Set the clip area to black with the clip color tool.

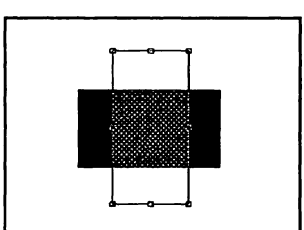
[3] Use the Outline command to outline the box.

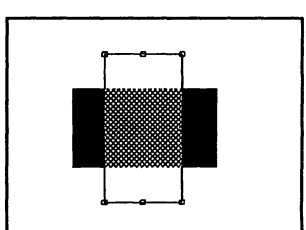
Mask

This command is used to create special effects using the fill patterns. It can be used to lighten dark areas of an image with various levels of masks. When you select this command another menu appears that offers the choice of White or Black.

White - This command uses the fill patterns in black. The pattern is overlayed on the clip area, producing the following results: Whenever part of the pattern that is black touches black in the clip area, that area is turned white; any parts of the pattern that are white will remain white. The illustration below on the left shows Mask White being used.

Black - This command uses the fill patterns, but first inverts them to white. The pattern is then overlayed on the clip area, producing the following results: Whatever is black in the image is replaced with white wherever the pattern touches it.





When the image is solid black, it's just like using the pattern itself in that area. Also, no matter which command you use, only the black interacts with the patterns, white areas in the clip area are never affected.

Mask is an effective tool to use when working with halftones. You can make a dark image light, and vice versa. If you are not satisfied with the pattern you selected, try another. Sometimes it may take several tries to achieve the effect you desire.

Note: Save your image before using the Mask command if you are unsure of the results.

Hint: As an alternative to using Mask, select a brush in Paint mode and paint an area with the pattern you want, using Transparent and Edge Off, painting with either black to darken, or white to lighten. By using Paint mode, you can always undo the mask if it does not yield the desired results.

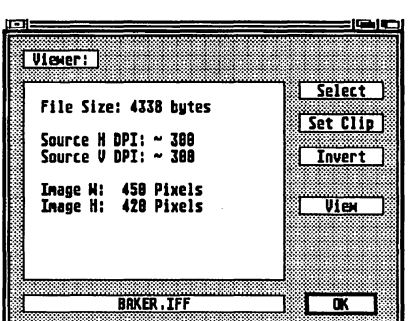
Viewer

This command allows you to preview color or monochrome IFF and monochrome IMG files before loading them onto your page or clip area and to set the clip box size. Previewing is a handy way to check an image if you're not sure what it looks like. It will also help you when deciding whether to overwrite a file or not with a new image.

To use the Viewer, follow these instructions:

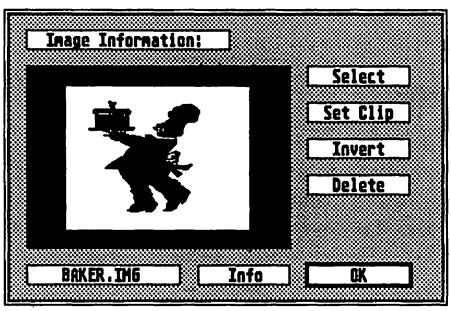
[1] Click on the Viewer icon. The File Selector will appear.

[2] Select the file BAKER.IFF (for this example) and click OK. A dialog box will appear that looks like this:



Rather than load the image first, this box appears and displays the file size in pixels as well as the pixel size and the exact width and height of the image. This information is useful when creating a clip box or when you want to know an image's size without having to load the image.

[3] Click on the button labeled View. The viewer will now display the image:



The image will appear in the large area with the file name displayed beneath it. The black background is provided so that you may see the actual shape of the image. To view the image without the background, click on the Invert button. This button acts as a toggle and provides a background opposite to the current one.

[4] Click on Set Clip. This sets the clip box to the exact size of the image so it doesn't distort when loaded. This is also the suggested way to merge other images onto the page.

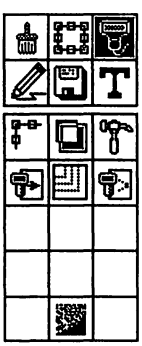
[5] Click on OK to leave the viewer.

Hint: If you find that you are using the previewer often, you may want to save most of your files in IFF format so you can really take advantage of this useful tool.

8. Scan Mode

*Note: If you intend on scanning, the scanner must already be installed. **DO NOT** try to hook up a hand scanner interface while the power to the computer is on.*

Scan mode provides the commands you need for scanning. When you click on the Scan icon in the mode icon pad, the tool icon pad changes to reflect the new tools and commands. The Scan mode icon pad looks like this:



Images you scan into Touch-Up are handled differently than existing images you load. Images you scan use the largest contiguous amount of available memory in the computer, so the length/resolution of the images you want to scan may be limited by the amount of available memory in your computer. Most 2MB owners should not have a problem scanning large

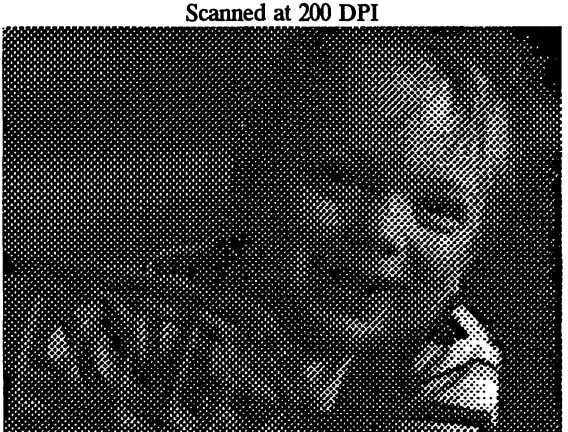
images at 300 or 400 dpi. 1MB owners may have to be more selective of options and settings they use in scanning to achieve the largest scan.

Understanding Resolution

When you scan an image, you will select the resolution at which the scanner scans. The resolution settings on the scanner let you match the resolution of the scanner with that of your output device, giving you better quality pictures. Resolution is a ratio of image-units (screen pixels) to area scanned (inches, centimeters). For example: 300 dots per inch. At higher resolutions, more dots are generated and more memory is used. Because of this, as the resolution increases, the maximum scan length decreases. In addition, since more dots are used for a given image at higher resolutions, the image appears enlarged on the screen.

The following examples illustrate the effects that different scanner resolution settings have on screen images.

Scanned at 200 DPI



Scanned at 300 DPI

Scanned at 400 DPI

In choosing a scanning resolution, a good rule of thumb is that if you want to print the image at a size close to the original image size, select a scanning resolution that corresponds to the resolution of your printer. For example: laser owners would scan at 300 dpi; 9-pin owners would scan at 100/200 dpi; 24-pin owners would scan at 200/300 dpi.

When you want to print the image larger than the original, scan the image at a resolution higher than the resolution of your printer. Example: laser owners should use 400 dpi; 9 and 24-pin owners should use 200 or 300 dpi.

If you will be converting the image to greyscale for onscreen use, scan at 400 dpi since greyscale conversion reduces the image size.

To check your printer's resolution, refer to the owner's manual for your printer. More information on saving images can be found in the chapter on saving monochrome and greyscale images.

Memory: How Big an Image Can I Scan?

The size of the image you can scan is directly related to the amount of available RAM (in your computer and the Touch-Up buffer that you set using Maximum Memory) and the resolution you want to scan at. Generally, 2MB owners will not be limited. 1MB owners may be limited depending on the scanning options they have chosen.

Whether you're scanning line art or halftones, Touch-Up calculates the image's memory requirements based on the image width/height and resolution you have chosen, not the type of image you are scanning. In Scan mode, Touch-Up looks to find the largest amount of available contiguous RAM. Contiguous RAM is RAM that is all in one area, whether it is in the Touch-Up buffer, or in the remaining free memory available in the computer. Based on the amount of available RAM and the scanning resolution that you have chosen, you may or may not be limited. For example, if you have a 2 MB system with no other applications running for files stored in RAM, you should be able to select any length up to 14 inches.

The scan length is displayed in the Scan Settings dialog box. When you change the scanning resolution such that there is not enough memory to scan the length you desire, after clicking OK, the dialog box will appear again, displaying the new maximum scan length. At this point you can either accept the new maximum length or lower the scanning resolution, which will allow you to have a greater scan length.

As you use your scanner, you'll learn what the limits are using different options. Because each person's system configuration is different, we cannot give you a list of specific size limitations for each computer.

Scanning Line Art and Halftones

Line art is any image that is solid black and white, or two solid colors, one light and one dark. For instance, a logo that is solid red and white would be considered line art. Examples of line art are illustrations, text, graphs, and charts.

When you are scanning line art that is on a white background, you shouldn't need to adjust the contrast setting. When you are scanning line art that is on a colored background, from a magazine for example, the contrast may need to be adjusted. When the scan appears on the screen, if there are background dots, set the contrast lighter and redo the scan. Depending on the background color, you may need to adjust the contrast to get a good scan. Feel free to try scanning line art on different backgrounds at various contrast settings since it only takes a few seconds to do a new scan. Trial and error is the best way to decide which results you prefer.

A halftone is any image that has shading, grey tones, or more than two colors. A photograph is a typical example of a halftone. When halftones are scanned, dither patterns of black and white dots are used to reproduce the shading, color, and tonal variations in the original image.

How the image looks when scanned depends upon the scanning resolution, the contrast of the original image, and the scanner contrast and dither

pattern. When scanning halftones, even with a poor original you can achieve good results because you control many of the variables.

To scan a halftone, follow the same directions as given for line art, but instead of using the line art setting, select a dither setting. Generally the halftones that scan the best are the ones with good contrast between light and dark areas of the image.

How To Scan an Image

The process of scanning is very simple. Once you know the steps, they are always the same. What will vary will be the options and settings you use that are available in Touch-Up.

Here is a practice exercise. The settings given are sample settings. Depending on the images you want to scan, you'll use different settings to meet your needs.

Sample illustration

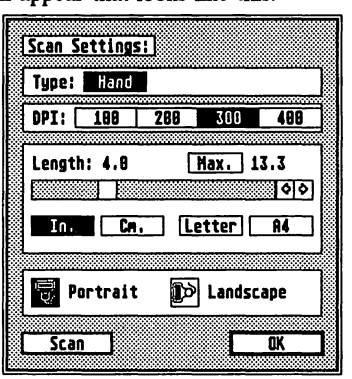
These instructions assume that you have already installed your hand scanner and are in Scan mode in Touch-Up. You will be scanning the sample illustration. Read the instructions through before proceeding.

[1] Select the line art setting on the hand scanner.

[2] Set the light/dark (contrast) setting to the center so the notch in the wheel is pointing out the side of the scanner.

[3] Click on the Scan Settings icon.

A dialog box will appear that looks like this:



This dialog box displays the current scanner DPI, the current and maximum scan length, and the current unit of measurement.

[4] Set the DPI on the scanner to 200. The DPI setting in the Scan Settings box will automatically be set to 200 to reflect the change.

There are some scanners whose DPI Touch-Up cannot autodetect. If the DPI in the Scan Settings box **did not** change when you changed the DPI on

the scanner head, you will have to manually change the setting in the dialog box every time you change the DPI on the scanner head.

[5] Move the mouse over the slider bar and drag the slider until the scan length reads 3.5 inches.

[6] Click on the Scan button. (This is just like clicking OK, and then clicking on the Scan to Full icon.)

This initiates a scan to full page. An alert box will appear that warns that scanning will destroy the current image. Click on OK to proceed with scanning. The screen will be cleared prior to your scan.

[7] Position the scanner above the illustration.

[8] Press and hold the start button on the scanner. Then slowly pull the scanner at a slow constant speed towards you, down the illustration until the scanning window light turns off.

The image appears on the screen as soon as you start scanning. After scanning you can use any of Touch-Up's tools to edit and enhance the image. If you don't like the scan, do it over. It only takes a few seconds.

To stop the scan short of the specified length, release the start button and scanner, and it will time out in 10 seconds. If you are close to the end of the scan length however, it may be quicker to finish the scan and erase that area than to wait for the scanner to time out.

There may be times when you want to use one scanning length to scan more than one area. To do this, initiate the scan as directed above. At the end of the first area, release the start button, then move the scanner to the new location and press and hold the start button again to initiate the scanning of the second area. Complete the scan as usual.

Note: The first time that you start a scan (either Scan to Full or Scan to Clip), there will be a slight delay while the speed of your Amiga is being determined.

Hint: If you are concerned about scanning in a straight line, use a straight edge (such as a book or ruler) as a guide for the left side of the scanner.

Scanning into a Full Page

Touch-Up offers you the option of scanning into a full page or into a clip area. When you use Scan to Full it replaces the current image with the new scan. When scanning an image into a full page, do not select the page size by using the Page/Clip info box. Instead, the width and height are determined by the options you select in Scan mode. The width of the page is equal to the full width of the scanner x the selected resolution.

The height of the image is determined by the scan length x the selected resolution. If the selected scan length is 2 inches and the resolution is 300 dpi, then the page would be 600 pixels tall. If the resolution is 400 dpi at 2 inches maximum length, it would be 800 pixels.

Remember, it is the amount of available RAM and the selected resolution that may limit your choices for scanning length. To adjust the page size when using Scan to Full you may select a different scanning resolution, and/or a different scan length.

Note: The previous scanning exercise is an example of scanning to a full page.

Note: Replace is always used as the writing mode with Scan to Full. The other modes are not active. If you wish to use another writing mode, you must use the Scan to Clip command.

Scanning into a Clip Area

Besides scanning onto a full page, you may scan into a clip area. This can be particularly helpful when you want to have two or more images on the same page or an image than is an exact size. The image you scan into the clip area will either replace the current image in that area, or react with it in different ways, depending on which writing mode is currently selected.

There is always a clip box present in Touch-Up whether it is displayed or not. If it is not currently displayed, click on the clip box icon in the tool menu to redisplay it or draw a new one. Drawing, moving and sizing a clip box function the same as in Clip mode. For more information on working with the clip box, please refer to the Clip mode chapter.

When you scan into a clip box, the size of the clip area you can set will be determined by one of three things:

a) the amount of available RAM remaining in the Touch-Up buffer
b) the amount of available contiguous RAM left in the computer
c) if no space is left in either a or b above, Touch-Up uses a 32K buffer that it has set aside. (This buffer will allow you to scan very small images, depending upon the dpi you have selected.)

Hint: Another way to increase the available RAM left in the computer for scanning to clip, is to decrease the size of the Touch-Up buffer. Use the Defaults dialog box under Miscellaneous Tools to adjust the Maximum Memory value for Touch-Up.

When scanning into a clip area, the scanner automatically shuts itself off when the scan reaches the bottom of the clip box or when it runs out of memory, whichever comes first.

There are two ways to set the size of the clip box. You may draw one yourself or use the Page/Clip info box to set an exact size. If you have set a narrow clip area, Touch-Up will fit what information it can into the clip area and throw the rest away. Likewise, if the clip area is wider than the scan width, there will be a white area next to the scanned image in the clip box.

Note: When using Scan to Clip, the scanning length is determined by the height of the clip box, not the scan length set in the Scan Settings dialog box.

Saving Greyscale Images

Now you can scan photographs with your scanner set to any of the three 'photo' settings and save the resulting scan as a 16 level IFF file great for screen display, or save a 24-bit IFF file, or an industry-standard TIFF 'G' greyscale image with or without LZW compression for DTP applications.

Greyscale images are particularly useful because they can be sized slightly without distortion. You won't see the 'plaid' effect you may have seen in bitmapped images not printed at the same resolution they were scanned at.

TIFF 'G' is an industry-standard format for saving greyscale images that can be imported into virtually any type of desktop publishing software. Uncompressed TIFF images are highly portable, even to other platforms, such as the Machitosh, Atari, and PC. Touch-Up lets you save images without compression from within the Save Greyscale TIFF dialog box.

Here is a general rule of thumb when trying to decide whether to convert an image to greyscale for dtp work: if the size of the image you wish to print is the same size as the original, save the image as a dithered mono-chrome file. If the size of the image you wish to print is slightly smaller than the original, save the image as a greyscale file.

Note: Before selecting the Save as Gray option for desktop publishing, be sure to verify that your dtp program will load greyscale files.

How Greyscale Conversion Works

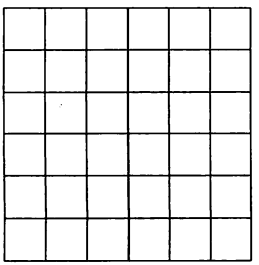
Here is a brief explanation of how a greyscale image is created. When scanning in dither mode, the scanner is capable of recognizing from 16-64 shades of gray which it passes through to the program as dithered patterns. Each dither pattern consists of an area ranging from 4x4 to 8x8 pixels. At zoom normal, each dot in the dither pattern corresponds with one dot on the screen.

When you save an image as a greyscale file, the image shrinks in size compared to the black and white bitmap image. This happens because during conversion, each (4x4, 6x6, or 8x8) cell from the monochrome dithered scanned data gets converted to a 2x2 gray cell.

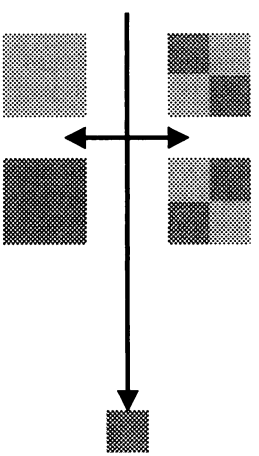
If you load the greyscale images into another paint program, it will help you to know how the greyscale conversion takes place. This can be especially helpful when working with IFF images.

The following page explains greyscale conversion. For more information on saving greyscale images, refer to the Greyscale icon in this chapter as well as the chapter on saving images.

How Greyscale Conversion Works



This is the shape of a dither pattern a scanner supplies to Touch-Up. It will produce high quality monochrome images, especially on 300 DPI laser printers. When you use Paint mode, or Clip mode at zoom level '1,' each dot in the dither pattern corresponds with one dot on the screen.



When you save a picture as a greyscale file, Touch-Up converts the dithered monochrome cell back into a greyscale 2x2 cell. This means its area is reduced compared to the original size of the black and white dither pattern. This happens because each monochrome (4x4), (6x6), or (8x8) cell from the scanned data gets converted to one of these greyscale 2x2 cells. You can then import the greyscale file into paint programs like Deluxe Paint to color its palette.

Scanning Tips

Here are some general tips about scanning.

If you know you'll be converting the image to a greyscale file, always scan at 400 dpi using a very light contrast, since greyscale conversion tends to darken an image.

To stop a scan before the specified scan length, release the start button and scanner. After a time out of 10 seconds, the scanner light will automatically shut off.

When scanning images at higher resolutions, move the scanner slower to avoid loss of data.

Use a straight edge, such as a book or ruler, as a guide to get a really straight scan.

If you look through the scanning window when scanning, the illuminated part of the image is the part being scanned. This will help you start your scan more accurately.

To use one scanning length to scan more than one area, follow these steps. Start the scan as usual. At the end of the first area, release the start button and move the scanner to the new location. Press and hold the start button again to initiate the scanning of the second area. Complete the scan as usual.

Replace is always used as the writing mode when scanning into a full page, while Scan to Clip can use any writing mode.

When scanning into a clip area, the scanner will automatically shut off when the clip area is full.

If you have set a long scan length and you scan less, you may press the start button to end the first scan, move the scanner to another image, press the start button again and continue scanning until the scanner light turns off.

If the original image is light, first try using the contrast setting on the scanner to adjust it. If that is not satisfactory, try making a photocopy and scanning the photocopy.

When scanning halftones using the different dither patterns, it's a good idea to do some sample printouts for reference, noting the scan and printing resolutions and dither patterns you used for each. The smaller dither patterns are good for screen work, while the larger dither patterns are better for images that will be printed.

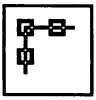
If you need to scan an image in a different direction so that it fits into the scanning window, that's okay. You can always rotate the full page or put the scan into a clip area and rotate the clip area.

Note: If you are editing a large image and the area you want to rotate is larger than one screen size at Zoom Normal on a monochrome monitor (or two screens on a color monitor), ***you may need 2Mb RAM or a hard drive.*** *An example would be rotating a full page which had been scanned at 300 dpi using full scanner width and a height of 6 inches.*

The reason for this is that when rotating a clip area Touch-Up uses available memory in the computer, other than that used by the Touch-Up buffer. On 1MB systems with large images, you may only have 32K available. This is true when you have told Touch-Up to take all the memory in your system, and the image you are working on uses all the memory in the Touch-Up buffer.

Scan Mode Icons

This section contains a list of the icons in Scan mode and a description of each tool and how to use it.



Clip Box

The clip box command is used to show and hide the clip box. If the clip box is hidden and you wish to display it, click on this icon. To hide the clip box, click on the icon again.

The clip box in Scan mode functions just like it does in Clip mode and can be created, sized, stretched, moved, etc. To create a new clip box, move the cursor into the image area, and while pressing the left mouse button down, move the mouse. The box will appear on the screen as you create it. Release the left mouse button when the box is the desired size.

For more information on manipulating the clip box, refer to the Clip mode chapter.

Writing Modes

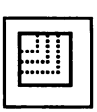
This command alters the way the image in the clip area mixes with the image already on the drawing surface. A complete description of this tool can be found in the Common Tools chapter.

Miscellaneous Tools

This icon offers a number of different tools that you'll use frequently. For a more detailed description of the options in this tool, please refer to Miscellaneous Tools icon in the Common Tools chapter.

Scan to Full

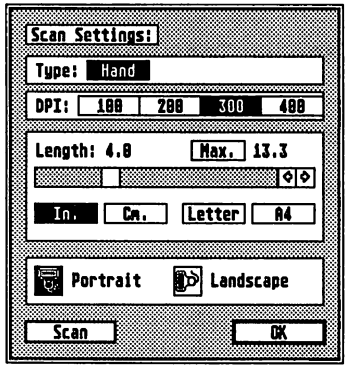
This icon is used to initiate the Scan to Full command. When you click on this icon, an alert box will appear. It states that the current image will be destroyed and offers you the choice to continue or abort. Select OK to scan, or Abort to quit. When you select OK, the scanning window light will come on and you may begin to scan your image. (Full details on scanning an image can be found in the first section of this chapter.)



Scan Settings Dialog Box

The Scan Settings dialog box displays the current resolution (DPI) that the scanner is set at and allows you to set the scan length and whether it is displayed in inches or centimeters.

When you click on this command a dialog box will appear that looks like this:



DPI - The current DPI value reflects the DPI that is set on the scanner head. When you change the setting on the scanner, the setting in this box will reflect the new value.

With some scanner models, Touch-Up is unable to automatically detect the DPI setting on the scanner. To test whether this is the case with your scanner, while in the Scan Settings box, change the DPI setting on the scanner. If the DPI setting in the dialog box changes, then Touch-Up can detect it. If not, every time you change the DPI setting on your scanner, you will need to enter the Scan Settings box and reset the DPI. Doing this will provide you with the best possible scans.

Length - The value next to the word "Length" reflects the current length setting and cannot be edited. The maximum allowable scan length for the current scanner resolution is displayed to the right.

To alter the scan length, you may either move the white slider bar by dragging it, or click in the grey area or on the arrow at either end of the slider bar. When you do any of these things, the length value above will change.

Generally, the only time you'll use the Scan Settings dialog box is when you need to change the scan length. However, it will appear on its own when you change the scanner DPI to a value that will no longer allow you to use the current scan length. In this case, when it appears, it will reflect the current DPI setting, and the length value will automatically be set to the maximum length allowable for that DPI.

If you must have a longer scan length, you will need to either lower the DPI value or increase the amount of memory available for scanning. A simple way to increase the amount of memory would be to shut down any programs you currently have running.

Unit of Measurement - To select a unit of measurement, click on your choice, either inches or centimeters. The value of the scan length will correspond to the selected unit of measurement.

Scanner Orientation - Scan & Save Plus allows you to scan both vertically or horizontally. The default is portrait (vertical). To scan horizontally, click on the landscape scanner icon. When you scan an image horizontally, it will be automatically rotated so that it appears vertically on your screen.

Note: When scanning horizontally, scan from the left side of the page to the right.

Scan - After you have adjusted any settings and you are ready to scan, click the Scan button to initiate a scan. This is just like clicking OK to exit the dialog box, and selecting the Scan to Full icon.

Scan to Clip

This command is used to initiate the Scan to Clip command. When you click on this icon, the scanning window light comes on and you may begin

scanning. Scanning into a clip area can be quite useful, especially when you want to have two or more images on the same page or an image of an exact size. The image you scan into the clip area will either replace the image in that area, or react with it in different ways, depending on which writing mode you have selected.

Save as Greyscale

This tool offers three choices regarding greyscale images: Save (Greyscale), Preview, and Save Preview. This command allows you to save any images you've scanned using the dither setting as a 24-bit IFF file, or as an industry-standard TIFF G file, with or without LZW compression. You may also preview greyscale images and save them in either Low Res or Hires-Interlaced format.

Greyscale images look better on the screen and so are preferable for multi-media work. They are also great to use for desktop publishing projects since they can be sized slightly without distortion, as long as they are close in size to the original.

You can load greyscale IFF files into any software that will display or edit Amiga 16 color images. That includes image viewer software and paint programs like Digipaint and Deluxe Paint. Once the image is loaded into a paint program, you can alter the 16 color palette of the image to colorize it. Depending on the palette manipulation facilities in your paint program, these are all kinds of possible effects you can create, just by changing the palette.

Here is a general rule of thumb when trying to decide whether to convert an image to greyscale for dtp work: if the size of the image you wish to print is the same size as the original, then save the image as a dithered

monochrome file. If the size of the image you wish to print is slightly larger or smaller than the original, save the image as a greyscale file.

Hint: When you plan to convert a scanned image to a greyscale file, you will have better results if you scan the image at 300 or 400 DPI using a very light contrast setting. Because the image is reduced during conversion, a dark image will appear even darker after conversion.

Note: Before selecting the Save as Gray option for desktop publishing, be sure to verify that your dtp program will load greyscale files.

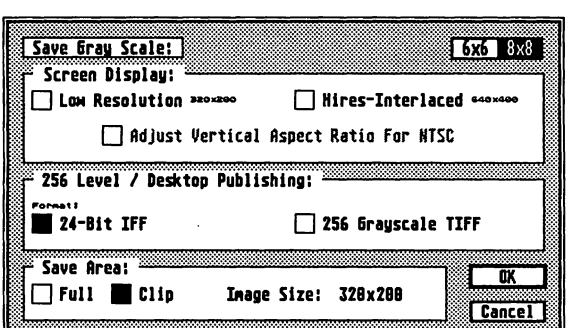
How to Save a Greyscale Image

To save an image (whether all or part) as a greyscale file, follow these directions:

[1] If you will be saving a clip area, select it now.

[2] Click on the Save as Gray icon.

[3] Select Save from the menu. The Save Greyscale dialog box will appear. It looks like this:



Click on your choices to select them.

6x6/8x8 Buttons - These two buttons allow you to select the correct dither to match your scanner. Select 8x8 for Golden Image scanners.

Screen Display - This section offers two choices for converting images to greyscale for screen display: Low Res(320x200) and Hires-Interlaced (640x400). The file is a standard IFF file which will contain 16 levels of gray.

Adjust for NTSC Aspect Ratio - This choice adjusts the height of an image to compensate for video. If you are using an NTSC system, select this choice. Don't use this button for images that you want to print, only for images you want to edit or display with a paint program.

Desktop Publishing - This section offers two choices for converting images for use with desktop publishing applications: 24-bit IFF and TIFF 'G'. Which format you select will depend on the DTP program you're using. When you select TIFF, the Save Greyscale TIFF dialog box will appear. Information on this dialog box is at the end of this section.

Save Area - The Full and Clip buttons let you specify whether you want to save the entire image or just the part inside the clip box.

Size: - This displays the correct height and width of the selected image or clip area in pixels.

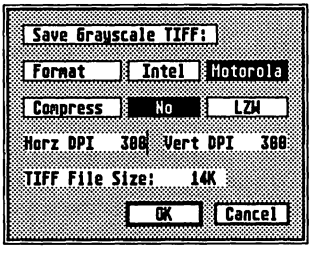
Greyscale Size: - This displays the height and width of the image *after* it has been converted to greyscale.

After making your choices, click OK. The File Selector will appear. Enter the file information and click OK. The converted image will be saved to the path and name you specified.

Note: For best compatibility with color paint programs, keep the size of the greyscale image you save (displayed in the Gray Scale dialog box), to under 1000 pixels wide and under 1000 pixels high.

Save Greyscale TIFF

When you choose TIFF, the Save Greyscale TIFF dialog box will appear. This dialog box allows you to define the specifics of the TIFF file.



Format - For the Amiga, Atari, Macintosh, NeXT or any computer based on a Motorola 68000 microprocessor, select Motorola. Select Intel for exporting TIFF images to the IBM PC or compatible computers, or any computer based on an Intel 80xx or 8086 microprocessor architecture.

Compress - Select LZW *only* if you know the application receiving the TIFF file supports LZW compression. If in doubt, select 'No'.

Horz DPI & Vert DPI - If the resolution of the output device that will print the TIFF image is other than 300 dots per inch, enter the horizontal (x) and vertical (y) resolution values.

File Size - This displays the file size when the file is uncompressed. When you select compressed, the value will not be computed and this box will be grayed out.

Once you've made your selections, click OK. The File Selector will appear. Enter the path and name for the file and click OK to save the file.

Multimedia

If you will be using the image for screen display, you may choose from either Low Res (320x200) or Hires-Interlaced (640x400). When you wish to have the image fill the screen, we recommend that you follow this procedure. This example is for 8x8 dither scanners.

[1] Scan the image at 300 or 400 DPI with a very light contrast setting.

[2] Select a clip area of 1280 x 800.

[3] Use the Save Greyscale dialog box and select Low Res or Hires-Interlaced. (When you select Hires-Interlaced, you may also select Adjust Vert for NTSC, which optimizes the screen height for video usage.)

This will produce a greyscale image approximately 320 x 200.

Note: If you have a high resolution video graphics card you may also select from the 256 Level/Desktop Publishing formats for screen display.

Desktop Publishing

If you will be using the image for desktop publishing **or** if you have a high resolution video graphics card, you may choose from two file formats: 24-bit IFF or 256 Greyscale TIFF. The format you select will be based upon the hardware in your system and the file formats your applications load.

Note: For best compatibility with color paint programs, keep the size of the greyscale image you save (displayed in the Gray Scale dialog box), to under 1000 pixels wide and under 1000 pixels high.

Preview

This command allows you to convert an image to greyscale format and then view the resulting file without saving it.

To preview a greyscale image, follow these directions:

[1] Click on the Save as Gray icon and select Preview from the menu. The Save Greyscale dialog box will appear. Note that the choices for Desktop Publishing are not available.

[2] Select either of the formats for **Screen Display** images. If you are running an NTSC system, also select the NTSC option.

[3] Select whether to convert the whole image or the current clip area. Then click OK.

Touch-Up will load the IFF Viewer through which you may view greyscale and monochrome dithered images. To view other parts of the image, move the mouse while depressing the left mouse button or use the arrow keys. The image will be scrolled in the direction you move the mouse.

Should you wish to save the image you are previewing, hit the 'S' key.

[4] After viewing, hit the Escape key or click the right mouse button to return to Touch-Up.

If you hit the S key and wish to save the image, select the Save as Gray tool again, and click on Save Preview. The File Selector will appear. Enter the file information and click OK.

If you will be using the image for desktop publishing, after previewing the image, use the Save (Greyscale) command and select one of the desktop publishing formats (24-bit IFF or 256 TIFF) from the dialog box. Either DTP format will contain many more shades of gray than what you saw in the previewer.

Save Preview

Use this command to save the file that you previously converted to greyscale and previewed. When you select this command, the File Selector will appear. Enter the path/file name and click OK. The greyscale file will be saved as you specified.

Note: Unless you hit the 'S' key while previewing, you will get a message that states there is no preview image. Go through the preview process again, making sure to hit the 'S' key.

9. Menu Commands

This section deals with the dropdown menus and commands found across the top of the Touch-Up screen. Most of these commands are duplicated in the icon pads and have been fully described under the different mode icons. This section provides a brief description of each command.

If a menu entry has a submenu, it automatically appears along side it when the command is highlighted. If the menu entry has three (...) dots after it, a dialog box will appear after you select the command.

Touch-Up

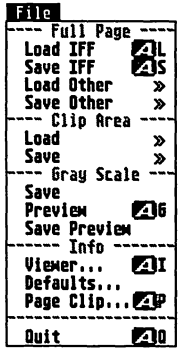
Touch-Up Info

This command brings up a dialog box which contains Touch-Up's version number, authors and copyright statement.

Palette...

This command brings up a dialog box which allows you to modify Touch-Up's colors by altering their RGB values. More information on the Palette can be found in the Installation chapter.

Project



Full Page - Commands in this section affect the whole page or image area.

Load IFF

Use this command to load an IFF file onto the page. When you click on this command, the File Selector box will appear. Choose the file you wish to load and click OK. The file will then be loaded onto the page.

Save IFF

Use this command to save the image on the page in a standard, compressed IFF file. When you click on this command, the File Selector will appear. Type in the file name and click OK.

Note: If the image being saved was originally loaded in, and was smaller than the current page size, a dialog box will appear that asks if you would prefer to

save out the original image area or the full page area. This way, if the image size has not been enlarged, extra area won't be saved unnecessarily.

Load Other..

Use this command to load an image in a variety of formats. When you select this command, a menu appears that offers these loading choices: IFF, IMG, PCX, TIF, MacPaint, and PrintMaster. After you select a format the File Selector will appear. Select the file you want to load and click OK. If it is a monochrome image, it will load directly. If it is a color image you will be asked to specify a method to convert the colors to black and white. After selecting a method, the image will be loaded onto the page. For detailed information on loading color images, refer to Loading Color Images.

Note: Currently, most color IFF and PCX files are supported.

Save Other..

Use this command to save your image in IFF or another format. When you select this command, a menu appears that offers the following save formats: IFF, IMG, PCX, TIF, Degas, GIF, MacPaint, and PrintMaster. The File Selector will appear once you have chosen a format. Enter the file name and click OK.

Both Degas and MacPaint formats are limited to a maximum size image that you can save. If you are unsure if your image is too large, you may use the keyboard shortcuts to set the clip area for either format, then use the Save Clip Other command to save the clip.

Note: If the image being saved was originally loaded in, and was smaller than the current page size, a dialog box will appear that asks if you would prefer to save out the original image area or the full page area. This way, if the image size has not been enlarged, extra area won't be saved unnecessarily.

All formats except TIF save directly. When TIF is selected, a dialog box will appear which is used to save additional information with the file. For a detailed description of this dialog box, see the Save Clip Area icon in the Clip mode chapter.

Clip - Commands in this section affect the clip area only. More information on these tools can be found in the Clip mode chapter.

Load..

Use this command to load an IFF or IMG file into the clip box using either Preserve or Ignore Aspect Ratio. When you select one of these commands, the File Selector will appear. Select the file you wish to load and click OK. Reload will reload the previously loaded file into the clip box.

Save...

Use this command to save the clip area in IFF or another format. When you click on this command a menu will appear that offers these save formats: IFF, IMG, PCX, TIF, Degas, GIF, MacPaint, and PrintMaster. The File Selector will appear once you have chosen a format. Enter the file name and click OK.

Note: Both Degas and MacPaint formats are limited to a maximum size image that you can save. If you are unsure if your image is too large, you may use the keyboard shortcuts to set the clip area for either format, then use the Save Clip Other command to save the clip.

Greyscale - Commands in this section pertain to converting images scanned with a dither setting to greyscale, and saving the greyscale file. Detailed information can be found in the Scan Mode chapter under the Greyscale icon, as well as in the chapter on saving images.

Save...

Use this command to convert the current image to a greyscale file. When you select this command a dialog box will appear offering different choices for converting the image to greyscale for screen display or desktop publishing applications.

Preview...

This command allows you to convert an image to greyscale format and then view the resulting greyscale file while in Touch-Up.

Save Preview

Use this command to save the file that you previously converted to greyscale and previewed.

Viewer...

This command allows you to preview color or monochrome IFF and monochrome IMG files before loading them onto your page or clip area and to set the clip box size. Previewing is a handy way to check an image if you're not sure what it looks like. It will also help you when deciding whether to overwrite a file or not with a new image.

Defaults...

Use this command to set the drive and path defaults for IFF files, the clipboard, and fonts. You have the option of changing the settings for the current session or saving them to your default options file which is read when Touch-Up starts.

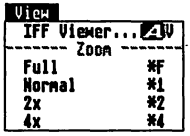
Page Clip...

Use this command to display information on the width and height of the current page and clip box. It also allows you to set the image area size and resolution when creating a new image and to set the clip box size.

Quit

Use this command when you want to exit Touch-Up. When you click on Quit, a dialog box appears that asks if you're sure you'd like to quit. Click OK to exit Touch-Up and return to the desktop or click Cancel to abort and stay in the program.

View



IFF Viewer...

Use this command to view monochrome and greyscale images while in Touch-Up. This is especially handy when you have a lot of files and cannot remember what they look like. When you select this command the File Selector will appear. Enter the file information and click OK. The file will be loaded. To access all parts of the image, you may use the arrow keys or depress the left mouse button and move the mouse. To quit the viewer, hit the escape key or the right mouse button.

Zoom Full

Use this command to display the whole image on the screen. Touch-Up allows use of most of the editing tools at this level. Refer to the chapter titled Common Tools for more information on Zoom Full.

Zoom Normal

Use this command to display the image at normal size. At Zoom normal, one pixel on the screen is equivalent to one pixel in the original image.

Zoom 2x

Use this command to display and edit the image enlarged to twice the original size. At Zoom 2x each pixel in the original image is represented by a 2 x 2 matrix.

Zoom 4x

Use this command to display the image enlarged to four times the original size. At Zoom 4x each pixel in the original image is represented by a 4 x 4 matrix.

Edit

Color

Use this command to set the pen and pattern colors. When you select this command, a menu will appear that offers you the choice of Black, White, or Opposite, and Black or White fill patterns. The current choices remain in effect in all modes until changed. These choices are also affected by the current writing mode. Refer to the Inkwell tool in the Common Tools chapter for more detailed descriptions of these commands.

Mode

Use this command to alter the way the objects you draw mix with the image already on the screen. When you select this command, a menu will appear that offers these writing modes: Replace, Transparent, XOR, and Reverse Transparent. Make your choice by clicking on it. The current choice remains in effect until it is changed. For a detailed description of writing modes, refer to Writing modes in the Common Tools chapter.

Pattern...

Use this command to select a pattern for drawing or fills. When you select this command, a dialog box will appear that offers 36 patterns plus a DPI option. Depending on the DPI option you choose, the same pattern may or may not appear different on the screen and printer. Also, by changing the writing mode, you may reverse and overlay patterns to achieve custom patterns. Note that the pattern box can be moved about the screen after selecting it.

Line Style...

Use this command to select a line style. When you select this command a dialog box will appear that offers several line options. Select your choice by clicking on it.

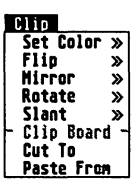
Lock

Use this command to "lock" polyline and sketch brushes in Paint mode so that you cannot move the brush once you have started creating it. If Lock mode is in effect, it will be signified with a check. For more information on this tool refer to the Common Tools Chapter.

Page

Use this command to clear or invert the entire image, or to set the clip box size to the exact size of the image.

Clip



Set Color

Use this command to set the color of the clip box. When you select this command, a menu will appear that offers the choice of White, Black or Invert. To clear the clip box, choose White. To make the clip box black, choose Black. Choosing Invert will change white to black and vice versa.

Flip

Use this command to flip the image in the clip area horizontally, vertically or both. The Both option will rotate the area by 180 degrees and can be used instead of the rotate command.

Mirror

Use this command to mirror the image in the clip box to the left, right, up or down. When you use mirror, the current writing mode will affect how the mirrored section looks.

Rotate

Use this command to rotate either the clip area by degrees, or the full page by ninety degrees. More information on the Rotate command can be found in the Clip mode chapter.

Slant

Use this command to slant the clip area either horizontally or vertically. It is not affected by the Writing modes.

Cut to Clipboard

Use this command to temporarily save the clip area to a file labeled CLPBOARD.TMP. The clipboard can be used to move areas (like cut and paste) around the page or even between different images.

Paste from Clipboard

Use this command to remove the image that was stored on the clipboard. When you click on this command, a box will appear that is the exact size of the saved clip area. With both mouse buttons up, move the box where you want and click the right mouse button.

Process

Bold

Use this command to "bold" any pixels in the clip area in either the horizontal or vertical direction or both. Horizontal adds an additional pixel to the left and right of each pixel. Vertical adds an additional pixel to the top and bottom of each pixel. Both places four pixels around each current pixel.

Cleanup

Use this command to "cleanup" stray black or white pixels (or both) from the clip area.

Outline

Use this command to outline any black area within the clip box. Once you select this command, everything in the clip area will be outlined.

Mask

Use the Mask command to lighten dark areas and darken light areas by overlaying the image with patterns. You may choose to overlay patterns of black or white and depending on which you choose, the pattern will interact with the image in the clip area in a different way. For more information on this command, refer to the Clip Mode chapter.

Notes:

10. Saving Monochrome and Greyscale Images

This chapter deals with the correct way to save monochrome and greyscale images. While saving an image seems to be an obviously simple task, getting the best looking printouts requires a little more work. This chapter will help you to understand why and how different images are saved in different ways, as well as help you get the best looking printout from an image.

Monochrome or Greyscale?

The type of image you save depends upon a number of things, including the type of image you're working with (line art or dither/halftone) and the final output (screen or printer). For the purposes of this discussion, line art means any image scanned using a line art setting, any image created within Touch-Up, and any image (not dithered) imported from another program (such as clip art). A dithered image is any image scanned with a scanner using any setting other than a line art setting.

If the image you're working with is line art, then regardless of whether you'll be showing the image to the screen or printing it, the image will be saved as a monochrome file.

Determining whether to save a dithered image as a monochrome or greyscale file however, requires more input on your part. Here are some basic questions to ask yourself when deciding on how to save your image.

1. Will the image be shown to the screen or printed? If you'll be using it for screen work, we recommend that you save a greyscale file since these appear much better on the screen.

2. If the image is to be printed, will it be used at exactly the same size as the original image, or will it be smaller? If it will be used at the exact size, then we recommend saving it as a monochrome file using the procedure described later in this chapter.

3. If the image is to be printed smaller than the original size, we recommend that you save the image as a greyscale file (since greyscale files are usually a portion of the size of the orginal), then size the greyscale file within your desktop publisher to meet your needs.

For the times when you want to print the image larger than the original that you scanned, the only sure way to do it is to scan the image at a larger dpi than your printer and save the image as a monochrome file. So if you're using a 300 dpi laser for instance, you would scan the image at 400 dpi. If you're using a 24-pin printer, you would scan the image at 300 or 400 dpi depending on your needs. Further information on scanning images can be found in the Scan mode chapter.

Saving a Monochrome Image

When an image is saved from Touch-Up, it has a specific size (height x width). Your printer also has a specific resolution. *The best printed images result when the size of the image (in pixels) evenly matches the area of the image in pixels that the printer will print. For example when you print an image that is 600 pixels x 600 pixels in a 2" x 2" area on a 300 dpi laser printer.*

However, what happens when the image is 598 pixels x 605 pixels? This poses a problem for the DTP software since it has to figure out how to rearrange the pixels in the image to fit the printer's specific resolution. When this happens, the images usually have a plaid or checkerboard look. It's not that the image itself is distorted, it's that the image was saved in a

pixel size that was not tuned for the printer's resolution. Using the following directions will help you avoid this situation.

How to Save a Monochrome Image

Here is an easy, step-by-step approach to saving a monochrome image.

[1] Calculate the size that you want the printed image to be. Perhaps 2" x 2".

[2] Check the resolution of your printer.

[3] Multiply the size of the image by the dpi of your printer. This will give you the exact pixel x pixel size that the image will need to be.

At this point, take a look at the original image and determine if the scanned image needs to be larger, smaller or is just right to fit into the final printed area. This will help you determine the scanning resolution.

[4] Scan the image at a dpi close to the resolution of your printer or at a dpi that will provide the image area that you need.

[5] Click on the Miscellaneous Tools icon and select Page/Clip. The Page/Clip dialog box will appear.

The size and resolution of the image is displayed, as well as the size of the clip box. The values can be displayed in inches, centimeters, or pixels. For most work we recommend pixels, but you may change back and forth if necessary, just by clicking on a different measurement.

[6] Change the dpi of the image to exactly match that of your printer (if it doesn't already). To do this, click on the horizontal value to move the cursor there, and hit the escape key to clear the line. Then enter the correct value. After editing both the horizontal and vertical values, click once on the word DPI. The new image values reflect the size of the image (and clip box) as it would be, printed at that resolution.

[7] Click on Inches to see the size of the clip box in inches. This will be the exact size that the image will print out on your printer. Adjust the height and width of the clip box (if necessary) to the size of the image you wish to print, for example 2" x 2". Note the size in inches for your DTP program.

[8] Exit the dialog box and make sure the clip box encompasses the area of the image you want to save, moving it if necessary. If the image area in the clip box does not meet your needs, then you may need to consider either saving a larger or smaller portion of the current image and using a new size in your DTP program, OR rescanning the image at a different dpi.

[9] If you wish to change the size of the clip box, re-enter the Page/ Clip box and be sure to note the exact size in inches. Use these values within your DTP program to set the exact area for the image.

[10] Select Save Clip Area from the File menu. The File Selector will appear. Enter the file name and click OK.

[11] Once in your DTP program, adjust the image area to the exact size of the image you saved from touch-Up. **Do not** enlarge or reduce it as this may produce checkerboarding.

The three most important guidelines are:

1. Have the pixel size of the image (HxW) exactly match the pixel area (HxW) of image that will be printed on the printer.

2. Make sure the image is the exact size you saved from Touch-Up when you are defining the image area on your page inside the DTP program.

3. Always save the image using Save Clip rather than Save Full.

Note: Unless the image you're working on is one which you've already saved using the guidelines above, we recommend that you always save the image using Save Clip, rather than Save Full.

Saving a Greyscale Image

Greyscale images are widely used for both screen and desktop publishing applications. Touch-Up offers several greyscale formats, each suited to different purposes.

Display Images

The IFF files that Touch-Up save are ideal for paint, video, and other kinds of screen display work. IFF/ILBM images have a 16 shade palette of gray shades. These files load into Electronic Arts' Deluxe Paint or any application that accepts 16 color IFF files.

Desktop Publishing with TIFF Greyscale Images

Touch-Up offers two formats for desktop publishing: 24-bit IFF and TIFF 'G'. You may use either format to save up to either 64, 128 or 256 grays depending on the dither of your scanner.

Greyscale images are particularly useful because they can be sized slightly without distortion. You won't see the 'plaid' effect you may have seen in monochrome dithered images not printed at the same resolution they were scanned at.

TIFF 'G' is an industry-standard format for saving greyscale images that can be imported into virtually any type of desktop publishing software. Uncompressed TIFF images are highly portable, even to other platforms, such as the Macintosh, Amiga, and PC. Touch-Up lets you save images with or without compression from within the Save Greyscale TIFF dialog box. Which format you select (IFF or TIFF) will depend on the DTP application you'll be using.

Note: Before selecting the Save as Gray option for desktop publishing, be sure to verify that your DTP program will load greyscale files.

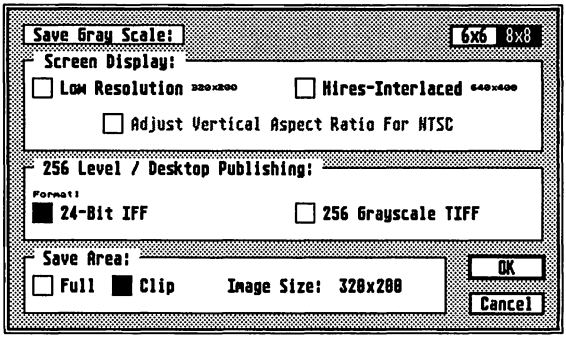
How to Save a Greyscale Image

To save an image (whether all or part) as a greyscale file, follow these directions:

[1] If you will be saving a clip area, select it now.

[2] Click on the Save as Gray icon (in Scan mode).

[3] The Save Greyscale dialog box will appear. It looks like this:



Click on your choices to select them.

6x6/8x8 Buttons - These two buttons allow you to select the correct dither to match your scanner. Select 8x8 for the Golden Image scanner.

Screen Display - This section offers two choices for converting images to grapyscale for screen display: Low Res(320x200) and Hires-Interlaced (640x400). The file is a standard IFF file which will contain 16 levels of gray.

Adjust for NTSC Aspect Ratio - This choice adjusts the height of an image to compensate for video. If you are using an NTSC system, select this

choice. Don't use this button for images that you want to print, only for images you want to edit or display with a paint program.

Desktop Publishing - This section offers two choices for converting images for use with desktop publishing applications: 24-bit IFF and TIFF 'G'. Which format you select will depend on the DTP program you're using. When you select TIFF, the Save Greyscale TIFF dialog box will appear. Information on this dialog box is at the end of this section.

Save Area - The Full and Clip buttons let you specify whether you want to save the entire image or just the part inside the Clip box.

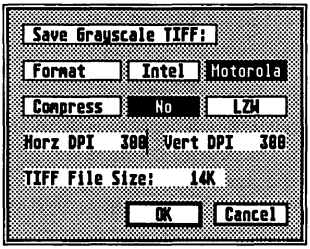
Size: - This displays the correct height and width of the selected image or clip area in pixels.

Greyscale Size: - This displays the height and width of the image *after* it has been converted to greyscale.

After making your choices, click OK. The File Selector will appear. Enter the file information and click OK. The converted image will be saved to the path and name you specified.

Save Greyscale TIFF

If you chose the TIFF format, the Save Greyscale TIFF dialog box will appear. This dialog box allows you to define the specifics of the TIFF file.



Format - Select Motorola for the Amiga, Atari, Macintosh, NeXT or any computer based on a Motorola 680x0 microprocessor. Select Intel for exporting TIFF images to the IBM PC or compatible computers, or any computer based on an Intel 80xx or 8086 microprocessor architecture.

Compress - Select LZW *only* if you know the application receiving the TIFF file supports LZW compression. If in doubt, select 'No'.

Horz DPI & Vert DPI - If the resolution of the output device that will print the TIFF image is other than 300 dots per inch, enter the horizontal (x) and vertical (y) resolution values.

File Size - This displays the file size when the file is uncompressed. When you select compressed, the value will not be computed and this box will be grayed out.

Once you've made your selections, click OK. The File Selector will appear. Enter the path and name for the file and click OK to save the file.

For more information on greyscale images, refer to the Scan mode chapter.

11. Loading Color Images

Touch-Up loads both color and monochrome images. While monochrome images load directly, color images must first be converted to black and white. This conversion process is called mapping and Touch-Up provides a variety of ways to do this. The choices range from simple to complex, and your choice of method will depend upon the image complexity, image size, and the end result that you prefer. This chapter explains the different mapping methods and the results they produce.

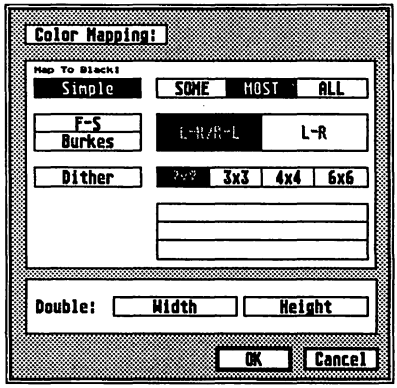
It's important to understand that the screen resolution is different from the resolution of the image you are working on, and that the resolution of your image may be different than that of your printing device. When loading color images, while Touch-Up provides as accurrate a display of the image as is possible, the final hard copy will look different from the screen display. When you are experimenting with the different loading methods, don't decide against a method just on the basis of the screen display. Print the image, then decide. Remember too, that when you are viewing an image at Zoom Full (especially with large images), that Touch-Up has to compress alot of information into a very small area. Don't judge a mapping method by what the screen displays at Zoom Full.

To load a color image, follow these directions:

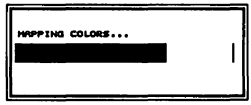
[1] Click on Load Other under the File dropdown. A menu will appear that offers a variety of formats.

[2] Select IFF by clicking on it. The File Selector will appear.

[3] Select the file CHEVAL.IFF (for this example) and click OK. A new dialog box will appear that looks like this:



[4] Select the mapping method and settings, if any. For this example click on Simple, leaving the defaults set as they are. Then click on OK. A new dialog box will appear that looks like this:



As the image is mapped, the black line will move to the right. When it is completely across the box, the image is finished being mapped and will appear on the screen. Once the image is loaded, you may work on it as you choose.

Important Points About Mapping

The mapping dialog box provides several basic methods for mapping colors to black and white. The methods are listed in order from the one that is the most simple conversion to the most complex. The first method is the fastest because the images are mapped to pure black and white. The others are slower because the colors are converted to different dither patterns of black and white. The more mapping that has to be done, the longer it takes to convert an image. We recommend using the first method, Map to Black/Simple, to preview your images, especially if you've never seen them before since it enables you to view many images quickly.

When mapping a color image, there are several points which must be taken into consideration. One is how much disk space an image takes when saved. Using any conversion method, the size of the converted image will remain the same as the color original. However, when you use doubling, the image size will grow. This may not be a problem unless you will be saving a large image to a floppy disk. If this is the case, you may wish to save only a portion of the image, or decide not to use doubling.

Another point to consider is what you would like the final image to look like. Do you want it to be large or small, with great detail, or with little detail? Several factors besides the mapping method will influence how the final printed image will look, including:

1. The resolution, size and complexity of the image.
2. The size of the final image.
3. The number of colors.
4. How close is the intensity of the colors.
5. The printer's resolution.

Mapping Choices

This section provides information on the mapping choices and the effects they have on color images. Before loading an image, select the settings, then click on the mapping method you desire.

Map to Black

This method is recommended for previewing paint images. You may choose a simple conversion, or one of two algorithms developed especially for mapping colors.

Simple

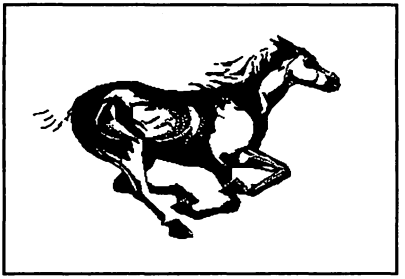
Simple is the default and good for pictures with few colors. You have a choice to have either all, most, or some of the colors turned to black.

ALL - This choice automatically turns all colored areas of the original image to solid black, while keeping the white areas solid white. The result is a harsh looking image that may not resemble the original very well. This choice works well for pictures with large solid areas with very few colors.

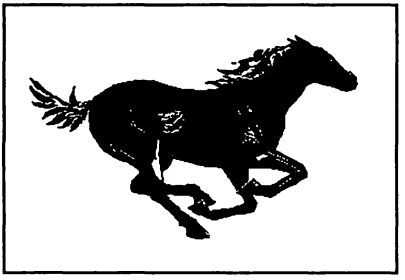
MOST - With this choice, colors that are about 30% black will be mapped to solid black. The remaining colors are mapped to white.

SOME - This choice offers the least radical treatment of the colors in that only the darker colors (those that are over 70% black) will be mapped to solid black, while the rest are mapped to white. This is the method we recommend for previewing images.

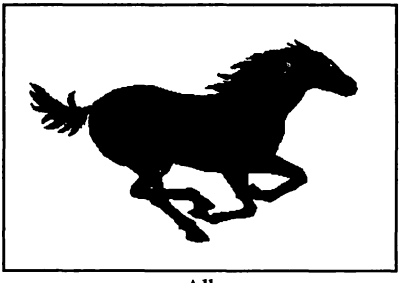
The image will look different depending on which one of these you choose. Since all or most of the previous colors are now black, the image will lose a lot of detail and depth that colors normally create. The following illustration shows the same image loaded using all, most and some.



Some



Most



All

F-S (Floyd-Steinberg) and Burkes

These two selections under Map to Black are algorithms developed for mapping color images to black and white. Rather than converting each color to pure black and white like the simple conversion, these methods provide textures that more closely imitate the colors. For instance, if your original image contains the colors red and yellow, the red is closer to black in color and so would be mapped to a darker texture of black and white. The yellow, being closer to white, would appear as either white or a very light texture of black and white. Each method will have a slightly different affect on your image. Complexity and amount of colors and their density will also play a part in determining how the converted image will look.

When choosing either F-S or Burkes you must also choose the way the image information is read by the algorithm, either L-R/R-L or L-R. When you select L-R, one line of pixels in the image is read from left to right. It then returns to the beginning of the next line and reads from left to right again. This process continues until the whole image has been read by the algorithm and converted. You can think of the process like a typewriter that types each line individually from left to right, except instead of typing information, the algorithm is reading it. Occasionally this method may "burp" or produce uneven or distorted pattern areas in the image.

When you choose L-R/R-L, the lines are read from left to right, then right to left, left to right and so on, sort of in a zig zag pattern. While this choice will have less image "burps" than the L-R has, the textures are different.

Remember, trial and error is probably the best way to discover which of these methods you prefer. With Map to Black, it only takes a short while to convert an image so feel free to experiment by loading the same image in a variety of ways.

Note that the top and left fringes of images converted with F-S or Burkes may need a little cleanup.

Dither

Another color mapping technique involves dithering. Dithering uses a matrix which is essentially laid over the image. After comparing its value to

the surrounding pixels, the matrix determines whether an individual pixel should be mapped to black or white. The size of the dither refers to the size of the matrix.

You may select from four dither options: 2x2, 3x3, 4x4, and 6x6. When you choose either of the last two dithers, a additional menu will appear offering these choices:

4x4 - Concentric, Net Point, and Bayer
6x6 - Concentric, Net Point, and Balance Net Point

Since each choice will produce a different result, we recommend that you use the sample file, SAMPLE.IFF to experiment with, so you can see the differences for yourself.

While using any of the dithering options, you may also double either the height or width (or both) of the image. This lets you create larger square aspect ratio images for use with Desktop Publishing applications. For instance, a 320x200 image converted with any of the dithers, while doubling the height and width, would produce a 640x400 image.

Note: Older IFF-ILBM files do not contain DPI information. Touch-Up converts the "aspect" numbers in IFF files into approximate DPI values.

12. Reference

Keyboard Shortcuts

1,2,3,4 These keys control the size of the Pen Tool in Paint mode. Number 1 is the smallest; number 4 is the largest.

F1 Puts you into Paint mode

F2 Puts you into Clip mode

F3 Puts you into Scan mode

F6 Cut Area to Clipboard

F10 When in Paint mode, use this key to paste information in the buffer onto the page.

While in Clip or Scan Mode

F Sets the page to Zoom Full

1 Sets the page to Zoom Normal

2 Sets the page to Zoom 2x

4 Sets the page to Zoom 4x

Ctrl A Sets the clip box to MacPaint page size

Ctrl C Clears the full page

Ctrl D Sets the clip box to Degas page size

Ctrl F Sets the page to Zoom Full

Ctrl I Inverts the full page

Ctrl L Toggle for Lock mode; on or off

Ctrl M Sets the clip box to 3 PrintMaster icon widths

Ctrl O Sets the clip box to the minimum size needed to enclose the black image information within.

Ctrl P Sets the clip box to 1 PrintMaster icon width

The following shortcuts use the Right Amiga key which is signified by A in this listing.

AV Brings up the IFF viewer

AL Loads an IFF file onto the full page

AP Displays the Page/Clip information box

AS Saves the full page as an IFF file

Questions & Answers

Our customers call us regularly to tell us how we're are doing. It's a perfect opportunity for us to make sure we're on track. We want you to be 100% satisfied with your Migraph products, so we've asked our Technical Support operators just what you ask. Here are some of the more common questions, and their answers:

Q: "Why am I getting a 'Disk Protected (or 'Read/Write') Error' when I try to use my Touch-Up work or master disk?"

A: This is a system-level error that has two possible causes: One, the write protect notch on the disk is set to 'protect' (you can see through it). Simple solution; just close it and try again. The other possibility is that the disk has been damaged somehow. If you have this problem and can't get it to go away, call us at (206) 838-4677 during business hours with your registration number handy, and we'll arrange to send a replacement disk to you. (Or fax 206-838-4677)

Q: "Why isn't there any text (or 'Why does text appear garbled') in the Touch-Up window and dialog boxex?"

A: Before you install and use Touch-Up, make sure you click on the 'Install Fonts' icon on the working backup copy you made of your Touch-Up disk. If you have a hard disk, there's probably plenty of room. If you are using a floppy based Amiga, we recommend that you make a separate bootable Workbench disk just for Touch-Up and its files...including the fonts.

Q: "Why can't I get measurements I type into the Page/Clip box to 'take' after I click the 'OK' button?"

A: Any time you change the horizontal or vertical DPI values in the Page/Clip box, click on the word **DPI** next to the measurement fields before you click 'OK.' If you are using inches or centimeters as the unit of measure, then the new values for the page and clip values will be calculated and displayed.

Q: "Why is there a gray area to the right (or bottom) of the 'Full' view, and why can't I draw anything on it?"

A: The gray area you see in 'full' view is just an area you can't use with the current Page and Clip area settings. Full view always shows you the boundaries of the page you defined in the Page/Clip settings box. This is also the actual shape of the page that is defined. If you neeed to change the shape of the page you are working on, pull down the Page/ Clip box from the File menu, and type new values into the IMAGE width and height fields.

Q: "Why can't I see my whole image on screen at once?"

A: If you use 'zoom 1' or Paint mode, Touch-Up gives you a 1:1 correlation of the pixels in your picture to the pixels on your monitor's screen. Any time you need to see the whole picture at once, go to Clip or Scan mode and press the F key. Press F1 to go back to zoom one.

Q: "After I save a greyscale picture and load it into my color paint program, it always looks too dark. Why?"

A: When you are planning to save a scanned image as greyscale, be sure you turn the thumbwheel on the scanner toward the LIGHT setting before you scan the image. Greyscale pictures tend to look darker than monochrome bitmap pictures.

If you have any questions on Migraph Touch-Up, please call or fax us. Technical support is available from 10am-5pm Pacific Standard Time. Just call (206) 838-4677 and request Migraph Technical Support or fax us at 206-838-4702. Registered owners receive our free newsletter Headlines, which provides information on updgrades, new products, etc. Please register your product to insure you receive this valuable information and technical support when you need it.

Terms

The following terms and their definitions will help you identify the various items and techniques within Touch-Up.

Bit-Image

Paint images are created on a dot by dot or pixel basis and are usually screen resolution dependent. In other words, one dot on the screen corresponds to one piece of information in the file. Images created with Touch-Up however, are not limited by the screen size or resolution. You may choose the size and resolution of your image based upon the amount of memory in your computer.

Scanned images originate from either line art or halftones which are then optically read into the computer using a hardware device called a scanner. These images can vary in resolution, or dots per inch, depending on the sophistication of the scanning hardware. The resolution of scanned images typically ranges from 75 to 400 DPI.

Digitized images are those which have been optically read into the computer through a video scanner. The images are usually saved in paint format.

Compressed bit-images are bit-images that have their information converted to a more size efficient form when stored on disk. Compressed and uncompressed images look the same on the screen, but the compressed method of storage is preferable because the files take up less disk space.

Click- A quick press and release of a mouse button.

Clip Area- The image area that is visually inside of the clip box.

Clip Box- A box that is used to select areas of the image that you wish to edit or save. It has eight markers on it called polymarkers which are used to alter the size of the clip box.

Contrast- A measurement which specifies the distinction between the light and dark areas of the image.

Dither- A method of using black dots to represent an image's tonal variations without using shades of grey. In this manner, when the image is printed, it will appear more like a photograph than line art.

DPI- Abbreviation for Dots Per Inch which describes the resolution of a device or file. It is typically used by hardware manufacturers to state the number of dots which can be output in both the horizontal or vertical direction for a given device.

Drag- Holding the left mouse button down while moving the mouse.

Halftone- An image that contains different colors, grey tones, or shading.

Hot Spot- This is the active pixel of the mouse pointer that affects the dot underneath it so different operations and commands can be performed. The tip of the pointing finger is one example.

Intensity- The apparent brightness of a color.

Line Art- Any black and white graphic which does not contain shades of grey.

Mapping- Mapping has almost the same meaning as convert. Basically it refers to changing graphic information from one form to another. For instance, in Touch-Up, all color pictures are "mapped" to monochrome. That is, all colors are converted to a shade of gray created by a pattern of black and white dots. Graphic information is also mapped when viewing a picture at different screen resolutions.

Mode Icon Pad- This is the top icon pad to the left of the work area which allows you to select different work modes. The current modes are: Paint, Clip, and Scan.

Object- Anything you can create and make into a part of the drawing. Squares and circles are obvious objects. Lines, polylines, arcs and text are also objects.

Page- The available work area for the image. This can be set inside the Page/Clip Information box.

Pixel- Abbreviation for picture element. It is the smallest addressable piece of a picture.

Pointer- The indicator on the screen that shows where you are on the page.

Press- Hold the mouse button longer than a click, then release it.

Resolution- Term that is typically used by hardware manufacturers to state the minimum distance between the centers of two adjacent dots in the horizontal or vertical direction for any hardware device. It is also used to express the maximum number of dots in the horizontal and vertical directions of a device.

Scanner- A scanner is a piece of hardware that optically reads information into a computer, usually from line-art or photographs. This information is then stored in a file which can be used with programs like Touch-Up or a desktop publishing program.

Tool Icon Pad- This is the icon pad below the mode icon pad and reflects the tools and commands available for the current mode. When a different mode is selected, the icons in this pad will change.

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